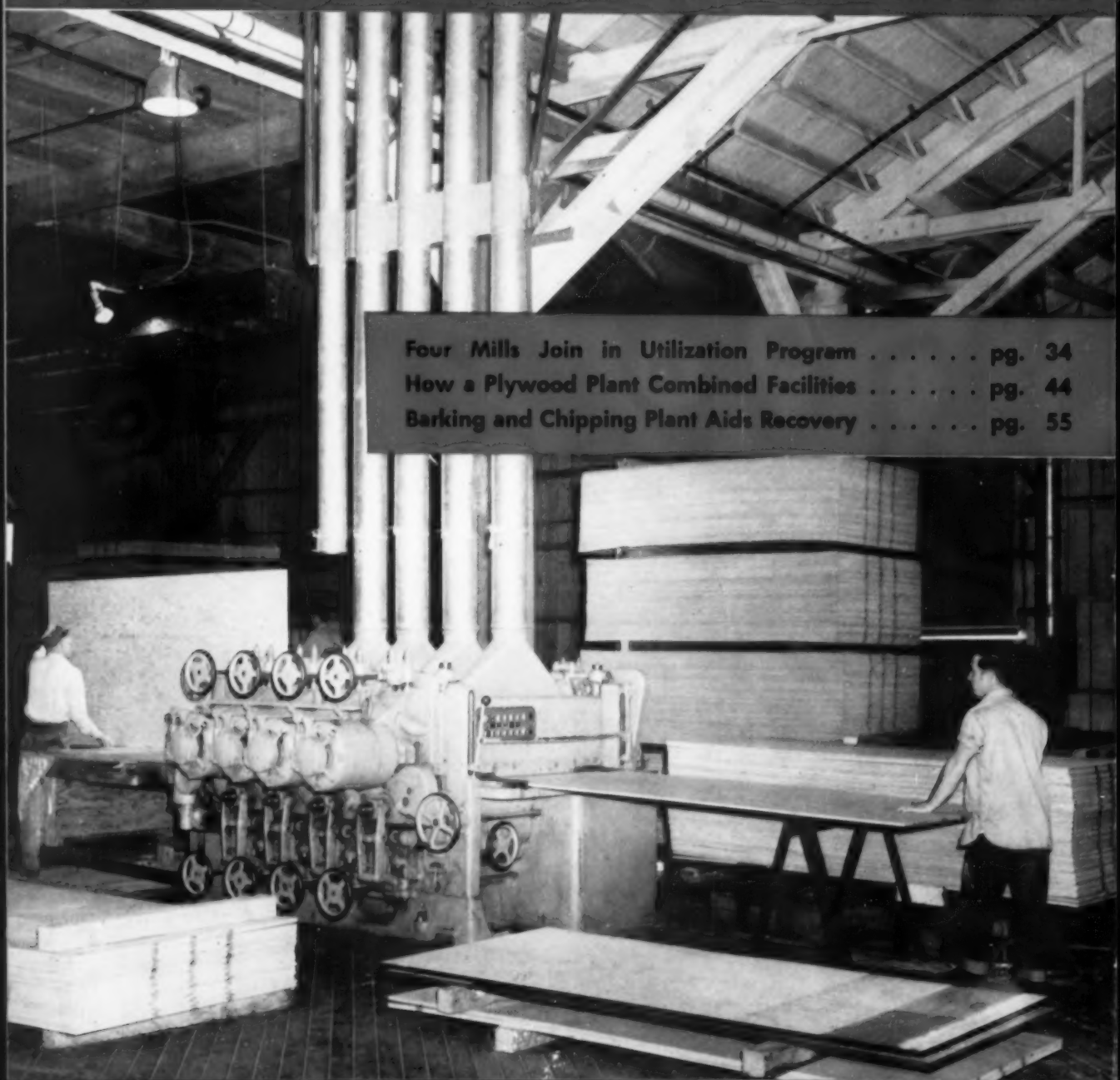
APRIL 19, 1957

THE Lumberman

LUMBER PLYWOOD BOARD WOOD MANUFACTURING

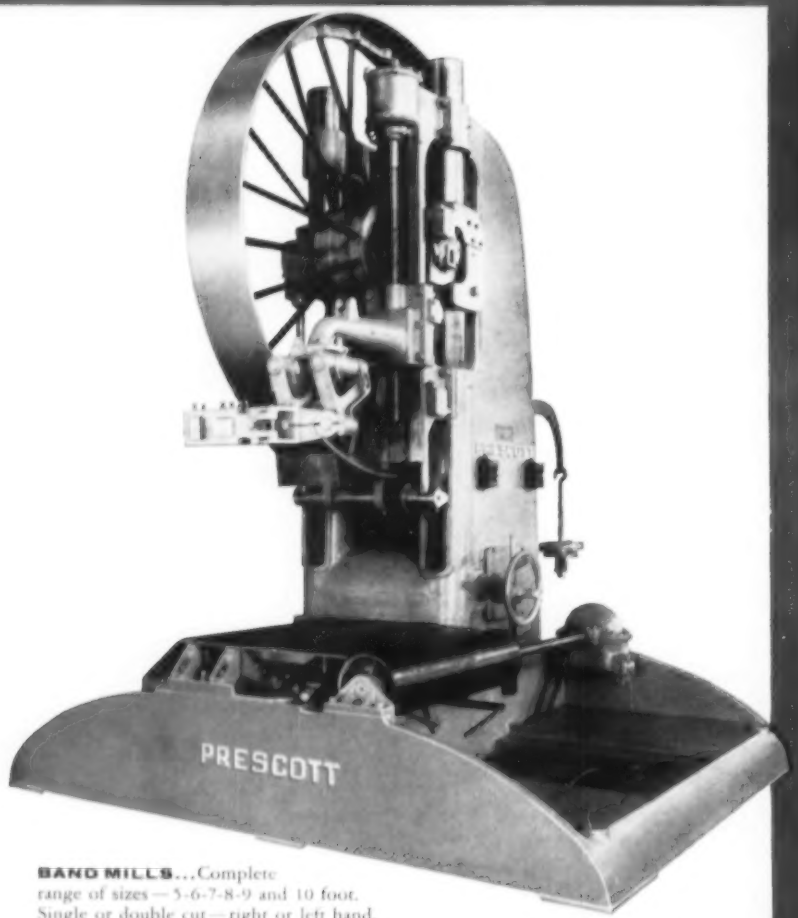


Four Mills Join in Utilization Program . . . . . pg. 34
How a Plywood Plant Combined Facilities . . . . . pg. 44
Barking and Chipping Plant Aids Recovery . . . . . pg. 55

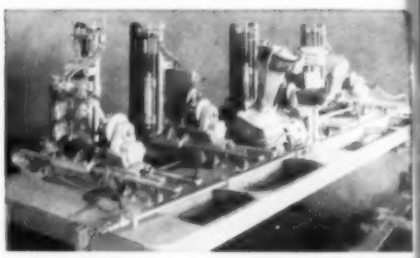
Higher Production
Lower Overhead
Greater Profits

PRESCOTT

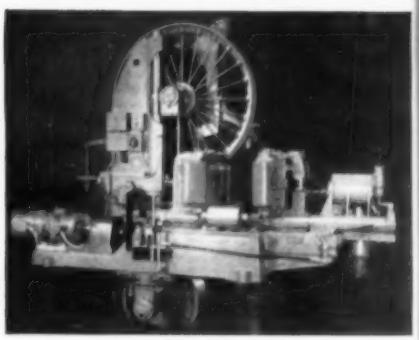
Sawmill Machinery



BAND MILLS...Complete range of sizes—5-6-7-8-9 and 10 foot. Single or double cut—right or left hand.



CARRIAGES Rack and pinion; screw block. Medium and heavy-duty. Right and left hand.



VERTICAL AND HORIZONTAL RESAWS Complete range of sizes—5-6-7 foot. Precision accuracy—minimum kerf waste.

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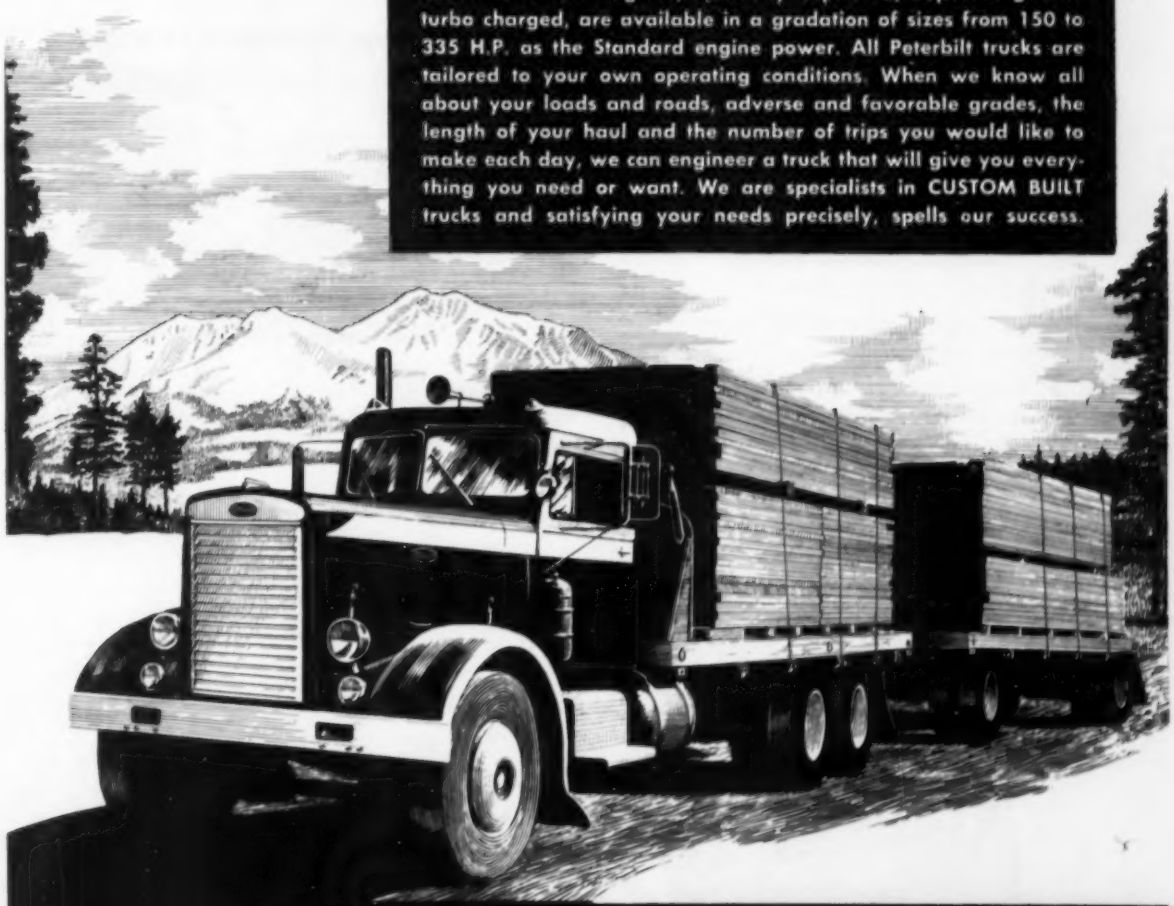

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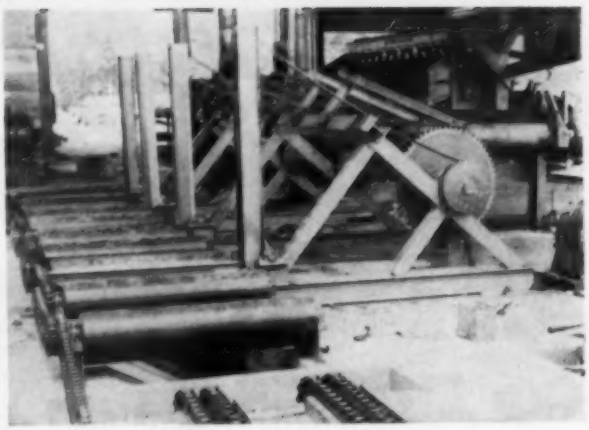
no installation problems



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Brass shoes replace cumbersome rollers at points of stress. Rubber shock pads ease columns into position; minimize wear, reduce costs.

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VOLUME 84 • NUMBER 5

April 19, 1957

EDGAR P. HOENER
Publisher and General Manager

THE Lumberman

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A MILLER FREEMAN PUBLICATION

Four Mills Join in Wood Chipping Program 34
Grays Harbor, Washington mills combine facilities to utilize their logging and milling residuals.

Montana Grain Door Plant Utilizes Low Grade Lumber 38
At Libby, Montana, J. Neils Lumber Co. operates new plant with many mechanical innovations.

Electric Carriage Drives Save Mill Power Costs 40
Crossett Company reports on three amplidyne units in two sawmills.

Job Training Program Improves Work Performance 42
Boise Payette Lumber Co. screens applicants and trains them to be better employees.

New Carriage Boosts Output 43
Grindle Lumber Co. in Alabama gets more and better lumber from installation.

Plywood Plant and Two Sawmills Combine Facilities 44
Coos Head Timber Co. in Oregon operates scrag mill, band mill and plywood plant.

Lumber Stacker Saves Space 47
B. C. firm develops the Carroll stacker, another potential in sawmill automation.

"Squawk Boxes" Simplify This Sawmill's Operation 48
Weyerhaeuser Timber Co. at North Bend, Ore. harnesses electronics to save time.

Briquettor Converts Residues Into Profits 50
Machine utilizes milling residues and also solves a smog problem.

Do-It-Yourselfers Bolster Lumber Market 52
Western Pine leaders anticipate modernization work will sell lumber.

Lumber Leaders See New Threat to Eastern Markets 53
West Coast Lumbermen's Association meets in Portland, Oregon.

New Barking and Chipping Plant Aids Wood Recovery 55
Crown Zellerbach Canada completes plant which adds 5000 units per month to chip output.

Leaders Review Housing 56
Western Forest Industries Association of Portland holds joint convention with Western Forest Management Association of British Columbia.

Resaw Ups Idaho Mill's Cut 57
Semi-automatic equipment added by Salmon River Lumber Company boosts recovery.

Miscellaneous

Production of Major Southern Sawmills—1956 68
Baltic Competes for U.K. Trade by Robert C. Hill 24

Departments

Tall Timber—W. E. Griffee 5
THE LUMBERMAN'S Lookout 7
Industry Trends 9
Late Forest Industries News 17, 18, 19, 20
Safety Engineering 27
EDITORIAL—New Battle of the Boards Faces Industry 33
Job Saving Ideas 58, 59
Plywood Department 60, 61, 62
Hardboard, Particleboard & Flakeboard 65
Log and Lumber Prices 96
Machinery & Equipment 86
Advertising Index 115

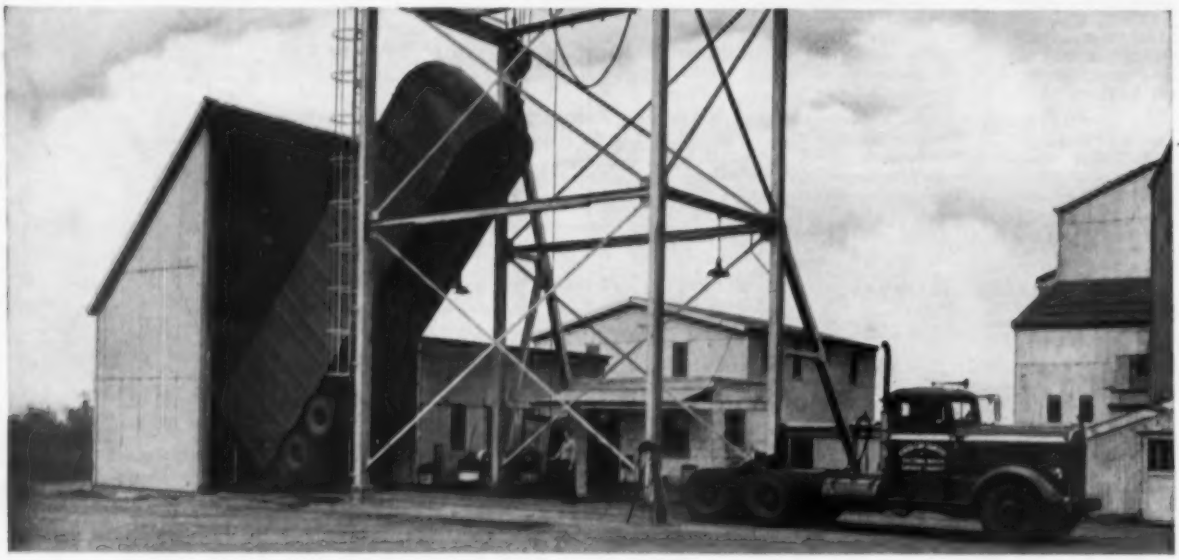
Industry Meetings

List of Industry Meetings 5

Standard Engineer's Field Report

CASE HISTORY
RPM Automotive Grease
LUBRICANT
FIRM Veneer-Chip Transport Co., Tacoma, Washington

RPM Automotive Grease replaces 4 special greases, saves $920 per year wheel-pack labor cost

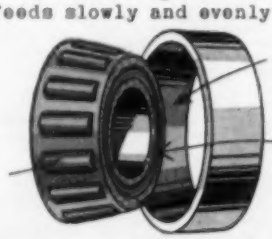


Veneer-Chip Transport Company replaced four special greases with RPM Automotive Grease in their fleet of six tractors and seventeen trailers. This change saves the company $920 per year for wheel-bearing service alone. Firm also uses RPM Automotive Grease in universal joints, chassis and fifth wheels.

Superintendent Tom Jones says, "We used to pay $40 per year for wheel-pack service in each of 23 vehicles. By eliminating special greases, wheel-bearing and all other lubrication is now done in our own shop. What's more, RPM Automotive Grease stays in torsion bars longer than any grease we've ever used." Equipment hauls wood chips from lumber mills to paper plant. Special hoist (above) dumps 38,000 lbs. of fir and hemlock chips from 35-foot trailer.

Why RPM Automotive Grease protects bearings under all conditions

Sticks to all bearing surfaces . . . feeds slowly and evenly



Stays on, maintains proper consistency even in freezing cold or extreme heat

Provides a tough lubrication film that protects against heavy pounding and overload pressures

RPM

Free Folder, giving complete information on RPM Automotive Grease, will be sent on request to Standard Oil Company of California, 225 Bush Street, San Francisco, California.

For Expert Help on lubrication or fuel problems, call your Standard Fuel and Lubricant Engineer or Representative, or write to 225 Bush Street, San Francisco, California.

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STANDARD OIL COMPANY OF CALIFORNIA

Our Cover Picture

IN NEW PLYWOOD PLANT of Coos Head Timber Co., Coos Bay, Ore. a Yates-American eight-drum sander surfaces finished panels.

Operating the plywood plant in conjunction with a scrag mill and a band mill, all of which have been integrated into a compact layout, Coos Head Timber Co. reports that the increased utilization of raw material has been extremely effective. The plywood plant produces about 48 million square feet of ⅜ inch, three ply interior type panels annually. The complete story of the entire operation begins on page 44.

Industry Meetings

May

Forest Products Research Society, Northern California Section, Claremont Hotel, Berkeley, May 2-3.

Junior Logging Congress, Pack Forest, LaGrande, Wash., May 8-10.

Forest Products Research Society, Pacific Northwest Section, Roseburg, Ore., May 13-14.

Western Kiln Clubs, Eugene, Ore., May 15-17.

7th Annual Governors' Industrial Safety Conference, Multnomah Hotel, Portland, Ore., May 16 - 17.

Mason County Forest Festival, Shelton, Wash., pageant, parade and logging sports demonstration, May 23-25.

Redwood Region Logging Conference, 19th annual, Eureka, Calif., May 24-25.

June

National Plywood Distributors Assn., annual convention, Edgewater Beach Hotel, Chicago, June 13-15.

Forest Products Research Society, annual national meeting, Exhibit, and Wood Industry and Suppliers, Hotel Statler, Buffalo, N. Y., June 23-28.

National Wooden Box Association annual summer meeting, Lake Placid Club, Essex County, N. Y., June 24-26.

August

Society of Automotive Engineers, Seattle, Aug. 12-16. (Members of forest industries will be participating.)

September

Hoo-Hoo, 66th annual national convention, Dinkler-Plaza Hotel, Atlanta, Ga., Sept. 15-18.

October

Pacific Logging Congress & Machinery Show, Seattle, Oct. 30-Nov. 1.

December

Western Forestry & Conservation Association, Olympic Hotel, Seattle, Wash., Dec. 10-13.

THE Lumberman

Presents as **Tall Timber**

W. E. GRIFFEE

Tall Timber

W. E. GRIFFEE

AMONG LUMBERMEN W. E. (Bill) Griffee of Western Pine is widely and favorably known as an able administrator and an astute analyst of lumber production and market conditions. Among oologists he's a man of even greater distinction as a result of more than 30 years' devotion to a hobby.

What, you ask, is an oologist? Well, he's an ornithologist (bird life scientist) who specializes in eggs. Bill has been oologing as a hobby since he was a youth in Kansas, and to show for it he has one of the outstanding private egg collections in the nation. This has taken some doing too, for he's a busy man in the lumber industry. He's assistant secretary-manager of the Western Pine Association, headquartered in Portland, Ore.

A career like Bill Griffee's is unusual indeed, and so is the man himself. To his associates he's a fellow of seemingly infinite capability. "He speaks and writes well, because he thinks well," they avow. He handles situations well, he's handy at woodworking, he swims and plays golf, he's a good bridge player and the ladies report he's a smooth dancer. He can scramble up cliffs or climb cloud-scraping trees—not for fun, you understand, but for bird eggs. Few men, according to close friends, "can do so many things so well."

A successful association executive has to be, first of all, a master in the art of working together with people and getting people to work together. That's the kind of job Bill has, and does. He has the advantage of being a team mate of one of the best in the business, Van Fullaway. Van and Bill have been at the helm while Western Pine has grown at least threefold in production and influence. Both are forestry graduates schooled also in wood technology, logging and sawmilling practices—and in working together with others in the interests of all.

Paradoxically, Bill Griffee is good at getting things done alone, too. His hobby is proof of this.

THE GRIFFEE CAREER in the lumber industry began in the industrial arts shops at Oregon State College in the mid-1920's. He was a carpentry addict. Still is. During vacations and time out to replenish the exchequer he toiled as a carpenter's helper. In college mid-stream, so to speak, he changed from industrial arts to forestry. With sheepskin safely stowed, Bill spent some time as a timber cruiser, wood technologist at Madison, field man for the NLMA and NRA code representative at Albuquerque for the pine manufacturers. In 1934, after nearly 10 years of varied experience, he was appointed assistant to Van Fullaway, secretary-manager of Western Pine.

In the years Griffee has been with Western Pine he has accumulated a broad knowledge of the industry, based in good part by personal contact with virtually all of the association's 375 member companies in 12 states. This knowledge he laces with a flair for statistics and cost accounting, and general savvy of American business, all the while keeping up a continuous assay of events in the construction world.

Armed thus with what just about has to be the best facts available, he teams up with Mr. Fullaway to give out with periodic production reviews and forecasts—reports that have become standards of reliability. Twice a year at the big association meetings he makes a speech summarizing the lumber situation. This talk has never been known to be dull, nor has Bill ever been known to use a written note to help him stay on the track.

Western Pine's coast-to-coast reinspection service is one of Bill's responsibilities. The association rotates a traveling team of inspectors from the 30-man Grading Bureau to handle reinspections requested at far away delivery points. Bill lays out itineraries to get these jobs done with all possible dispatch. The work has to mesh in with the regular mill grade inspection service and other Grading Bureau work supervised by Vern Johnson.

BILL'S FATHER AND MOTHER were both educators. His mother, still active, able and self-reliant, lives in the Los Angeles area. Back in Norton, Kansas, where the senior Griffee was high school principal, young Bill at

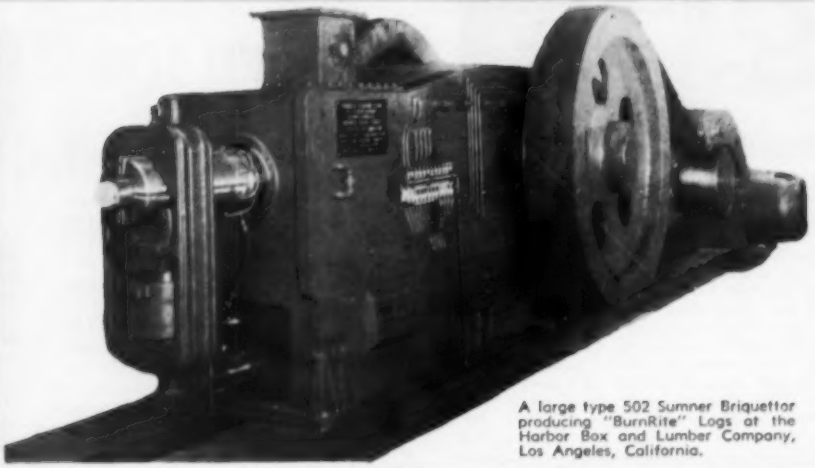
(*Continued on page* 80)

Sumner BRIQUETTORS
. . . FOR GREATER WOOD UTILIZATION

BURNER SMOKE *MEANS WASTE*

You can convert that waste to profit with a

SUMNER BRIQUETTOR

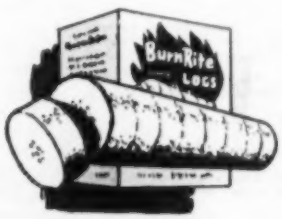


A large type 502 Sumner Briquettor producing "BurnRite" Logs at the Harbor Box and Lumber Company, Los Angeles, California.

The Sumner Briquettor is a high production machine receiving universal acclaim as another great stride toward complete wood utilization. The name "BurnRite" is the trade mark used to describe fuel logs or briquettes produced by a Sumner Briquettor. "BurnRite" Logs are a compressed wood product formed to break into sections without chopping, sawing, muss or fuss. In their manufacture the Sumner Briquettor does not require a binding agent, and the density of the log can be regulated.

"BurnRite" Logs do not smolder. They burn with a flame, and the burning is complete with very little ash remaining. They are ideal fuel for fireplaces, barbeques, heaters, furnaces, kitchen ranges, galleys, trailers, camp stoves, etc., and industrial purposes. Packaged in cartons they are attractive to display and convenient to handle.

A smaller type 154 Sumner Briquettor is producing "BurnRite" Logs at the Columbia Hardboard Company, Everett, Washington. There are three types and sizes of Sumner Briquettors available to satisfy individual requirements.



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The SUMNER BRIQUETTOR is also used to briquette other industrial and agricultural residuals such as nut husks, cotton stalks, sugar cane and olive bagasse, rice husks, sugar beet pulp, cellulose materials, peat and peat moss, and various grades of coal . . materials formerly considered too difficult to briquette.

Write today for descriptive bulletin and complete information. We will be happy to briquette a representative sample of your material.

The LUMBERMAN'S LOOKOUT

WHILE IT MAY BE ONLY A FLASH in the pan and too early to say an upward trend is developing, there are several encouraging developments indicating improvement in demand for forest products. Orders for southern pine, western pine, Douglas fir and redwood, as well as for plywood in late March and early April showed quite an increase. This surge of new business likely stems from the fact that buyers feel prices will be no lower, that building will be stimulated by the easing of mortgage credits, and that there is a possibility of a labor tie-up in the West. It seems good business to buy forest products now and to get the stock rolling.

THE BEHAVIOR OF PRICES on green lumber as compared with dry stock, during the past six months, should point to the desirability of seasoning and remanufacturing as much lumber as possible. Mills able to supply mixed car deliveries have not suffered in anywhere nearly the same degree as the straight green lumber mill shippers. Obviously all green mills cannot provide seasoning facilities but many mills might do so. The small green mill operators should not rule out the possibility of installing dry kilns and providing some finishing facilities.

THE CONTRACT LOGGER is a more important figure than many suppose. For instance in Idaho, authorities say he accounts for at least seventy-five percent of the state's log production. The trend is toward more contract logging in all areas. There are a number of factors which are decidedly favorable to the contract logger, but in times like these when the margin of profit for the sawmills has shrunk, the contract logger being in the middle, is subjected to terrific pressure and for the time being finds himself in a tough spot.

THERE MAY BE NO CONNECTION, but it is interesting to note that during a period of declining demand and sagging of prices, manufacturers of forest products are likely spending more than in any previous year for new plants, new machinery and equipment to provide greater efficiency, and better manufactured products at lower cost. Data gathered at first hand by THE LUMBERMAN from large and small mills across the country indicate the industry will this year spend close to a billion dollars on capital investments. This is a very significant trend.

HOW CAN INDUSTRY members profit more from conventions? Many people tell THE LUMBERMAN editors that meetings are getting too long and too dry. One answer: cut the sessions reasonably short, plan sufficient time for delegates to mix informally and exchange ideas. The value of each session should not be judged on how much time it takes but how much new information is brought out.

MORE DOORS ARE OPEN in the field of "silvichemistry" (a word coined by Rayonier and now in general scientific usage) with the word that Rayonier has discovered a new synthetic polyester fiber based on conversion of pulp waste liquors. This same fiber can be obtained from chemicals derived from bark and needles of western hemlock. The market problem, however, is another story. A Canadian leader states his company could make 3000 gallons of alcohol at his mill every day. but. he says, there is no existing market which justifies the investment for conversion plants at this time.

TURN WOOD WASTE INTO PROFITABLE PULP CHIPS!

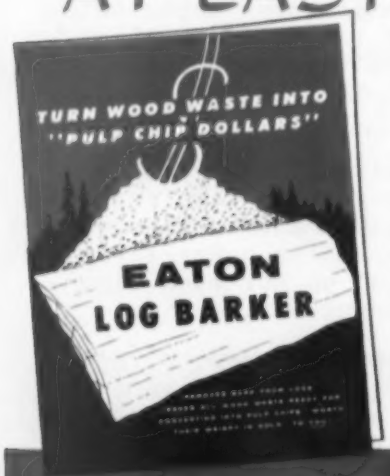
with the new

EATON LOG BARKER

Leaves all wood waste ready for converting into pulp chips and other bark-free products.

AT LAST!

A log barker you can afford to own and operate!



Designed particularly to meet the needs of the average sawmill operator, the Eaton log barker fulfills the long-felt need of a heavy duty machine that is low in installation, maintenance and operator cost. One man can operate it!

Handles logs from 5" dia. up to 4'. Chain-flail type head. Discharges bark-free logs automatically.

Write today for further details and your copy of this illustrated bulletin. We think it will be well worth your while!

WHITE RIVER MACHINE CO. INC.
ROCHESTER, VERMONT

INDUSTRY TRENDS

Shipments from the Western Pine Region in the second quarter of 1957 are expected to run about 1.95 billion feet, 11% below the volume in the same period of 1956. An estimated production of 1.47 billion feet in the first quarter reduced stocks by 117 million feet to 1.99 billion feet. This is 313 million feet higher than a year ago. The largest stock increases are in ponderosa pine, Douglas fir and larch.

National carloadings of forest products are running 10.4% behind the pace of 1956 and 7.1% behind 1955, the Association of American Railroads reports. At the end of 10 weeks, carloadings totaled 391,069 cars, compared to 436,343 in 1956 and 420,955 in 1955.

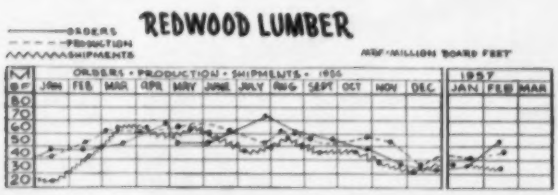
Shipments of box shook in 1956, nationally, was 10.7% below the level of 1955, the National Wooden Box Association reports. Shipments totaled 570,-432,802 feet, compared to 639,023,631 feet in 1955.

Activity held up better in the east where 54 plants report shipments down 6.2% from 178,202,631 feet to 167,163,802 feet. In the west, shipments were down 12.5%, from 460,821,000 feet to 403,269,000 feet. A decline of 43.6% in the Inland Empire was an important factor in the western picture. No single area nationally had an increase.

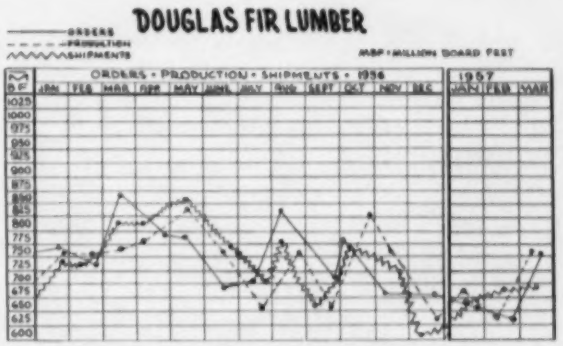
Production and use of wood pulp in the United States in 1956 were at all-time highs. Domestic production totaled 22.1 million tons, a gain of 1.3 million tons over production in 1955. Imports of pulp totaled 2.4 million tons. Of the U. S. production, 535,000 tons were exported. Consumption, plus some additions to inventories, amounted to 23.9 million tons, an increase of 1.5 million tons over the preceding year.

The 103rd quarterly report of the Lumber Survey Committee to the Department of Commerce shows these basic trends in the lumber industry in 1956: Lumber production in the United States was 4% below 1955, consumption was down 7%, gross mill stocks at the end of the year were up 13% from a year ago and the unfilled order file declined 12%.

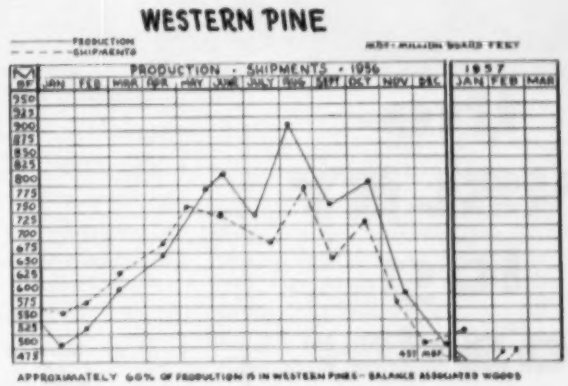
Softwood plywood plants in the west at the end of March were producing at about 80% of capacity. Improvements in the new order file during the month, climaxed by 127 million square feet of new orders in the final week, brought the unfilled order file up to 314 million square feet. A month earlier unfilled orders totaled 260 million square feet. However, they are still below the 389 million square feet of a year ago. Throughout March, new orders exceeded production.



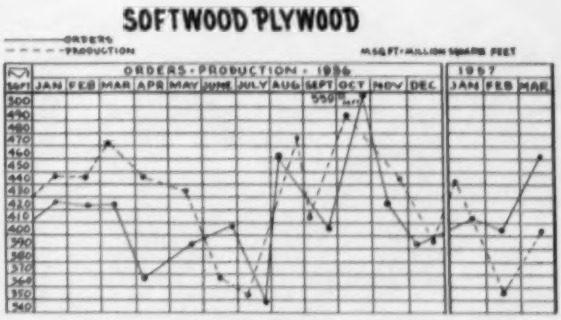
REDWOOD production in February is reported at 46.7 million feet by 15 major producers. Shipments totaled 33.4 million feet; orders on hand, 50.2 million feet; stocks on hand, February 28, 408.4 million feet. Comparable figures for February, 1956, are: production, 53.9 million feet; shipments, 42.2 million feet; orders on hand, 48 million feet; stocks, 377.6 million feet.



DOUGLAS FIR region production for three months of 1957 is 2.14 billion feet; three months, 1956, was 2.31 billion feet; three months, 1955, 2.56 billion feet. Orders for the three months totaled 2.04 billion feet; shipments 2.01 billion feet. Unfilled orders on March 31 totaled 635 million feet; gross stocks, 1.2 billion feet.


WESTERN PINE
PRODUCTION
SHIPMENTS
M BF - MILLION BOARD FEET
PRODUCTION - SHIPMENTS - 1956
1957
JAN FEB MAR APR MAY JUNE JULY AUG SEPT OCT NOV DEC
JAN FEB MAR
APPROXIMATELY 60% OF PRODUCTION IS IN WESTERN PINES - BALANCE ASSOCIATED WOODS

WESTERN PINE region production in February totaled 486 million feet, down from 531 million feet in February, 1956. Shipments were 492 million feet, compared to 578 million feet a year ago. Gross stocks on February 28 were 2.02 billion feet, compared to 1.7 billion feet on the same date a year ago.


SOFTWOOD PLYWOOD
ORDERS
PRODUCTION
MSQ FT - MILLION SQUARE FEET
ORDERS - PRODUCTION - 1956
1957
SEPT JAN FEB MAR APR MAY JUNE JULY AUG SEPT OCT NOV DEC
JAN FEB MAR

DOUGLAS FIR PLYWOOD production in the first 13 weeks of 1957 totaled 1.27 billion square feet, down 5.5% from the same period of 1956. New orders in the period totaled 1.25 billion square feet. Totals based on mills producing 89.1% of western output.

Insley Log Loader owned by Hegewald Timber Co., Stevenson, Washington

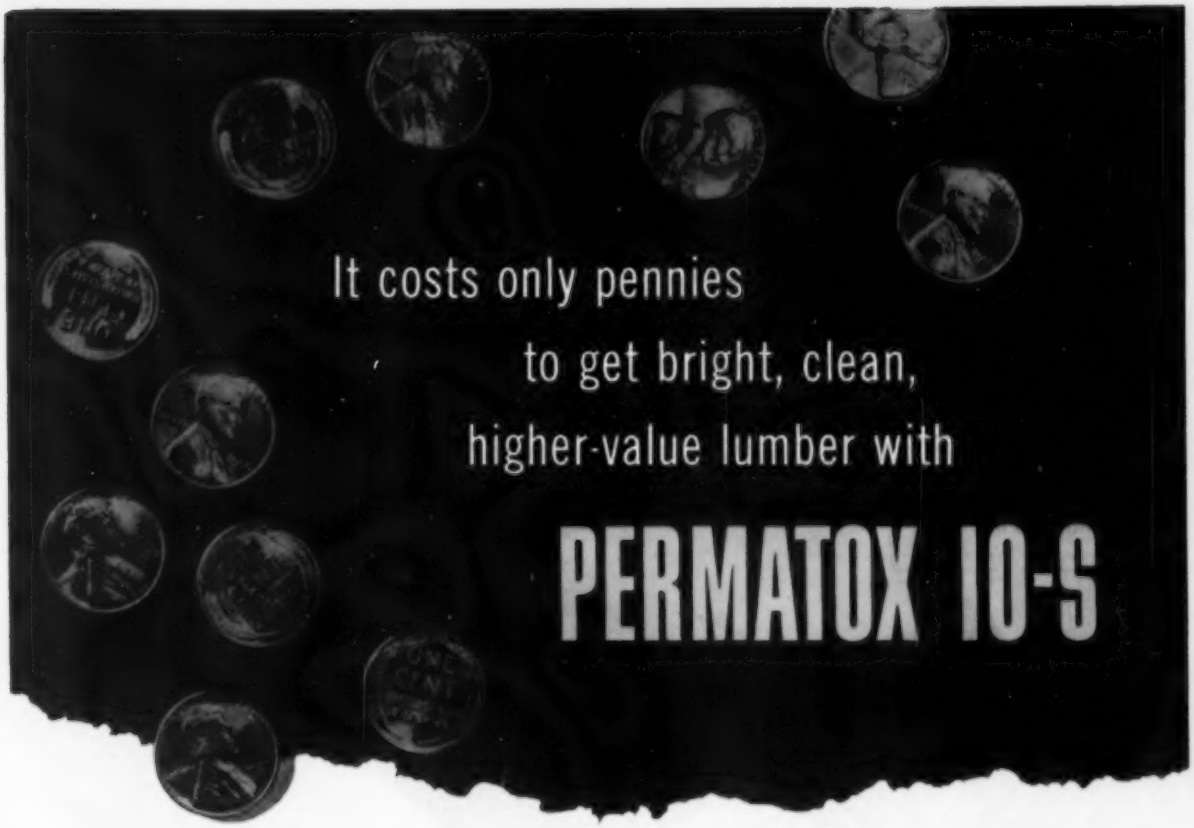
the INSLEY log loader

The Insley Log Loader has the mobility needed for "spot-loading" and clean-up work. It is adaptable to all types of logging booms and to a full range of attachments for off-season work. Insley Log Loaders can be supplied with gasoline or diesel power and equipped with a fluid coupling or torque converter. Available with self-propelled Maxi carrier, lorry (truck) or crawler mounting.

Let your Insley distributor show you an Insley at work, or, for further information, write:

INSLEY MANUFACTURING CORPORATION · INDIANAPOLIS, INDIANA

wholly owned subsidiary | **THE MAXI CORPORATION · LOS ANGELES**



PERMATOX 10-S prevents stain and mold . . . makes lumber worth more

Permatox 10-S is the most effective chemical product yet developed for control of stain and mold in lumber during air seasoning. It saves many times its low cost by preventing expensive degrade which cuts profits.

Application of Permatox 10-S is simple with inexpensive dip or spray equipment requiring little labor. This improved sap stain chemical is practically dust-free and extremely easy for workers to handle and mix.

Mix with Ambrocide to stop insects, too

For full protection to lumber in the drying yard, Permatox 10-S can be mixed with Chapman Ambrocide. This prevents damage by beetles and other insects.

The value of Permatox 10-S has been proved in years of use by large and small mills and concentration yards. It assures highest prices for lumber.

Write Chapman Chemical Company for information on any problem in the field of wood preservation.

CHAPMAN CHEMICAL COMPANY
Leading manufacturer of wood preservatives
Memphis 1, Tenn.
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CHAPMAN®

PERMATOX 10-S

Prevents BOTH sap stain and mold, in freshly cut hardwoods AND softwoods

Mail Coupon for Full Information

Chapman Chemical Company
P. O. Box 138, Memphis 1, Tennessee
Send Bulletin 51-S on Permatox 10-S for stain, mold and insect control to:

Name_____

Address_____

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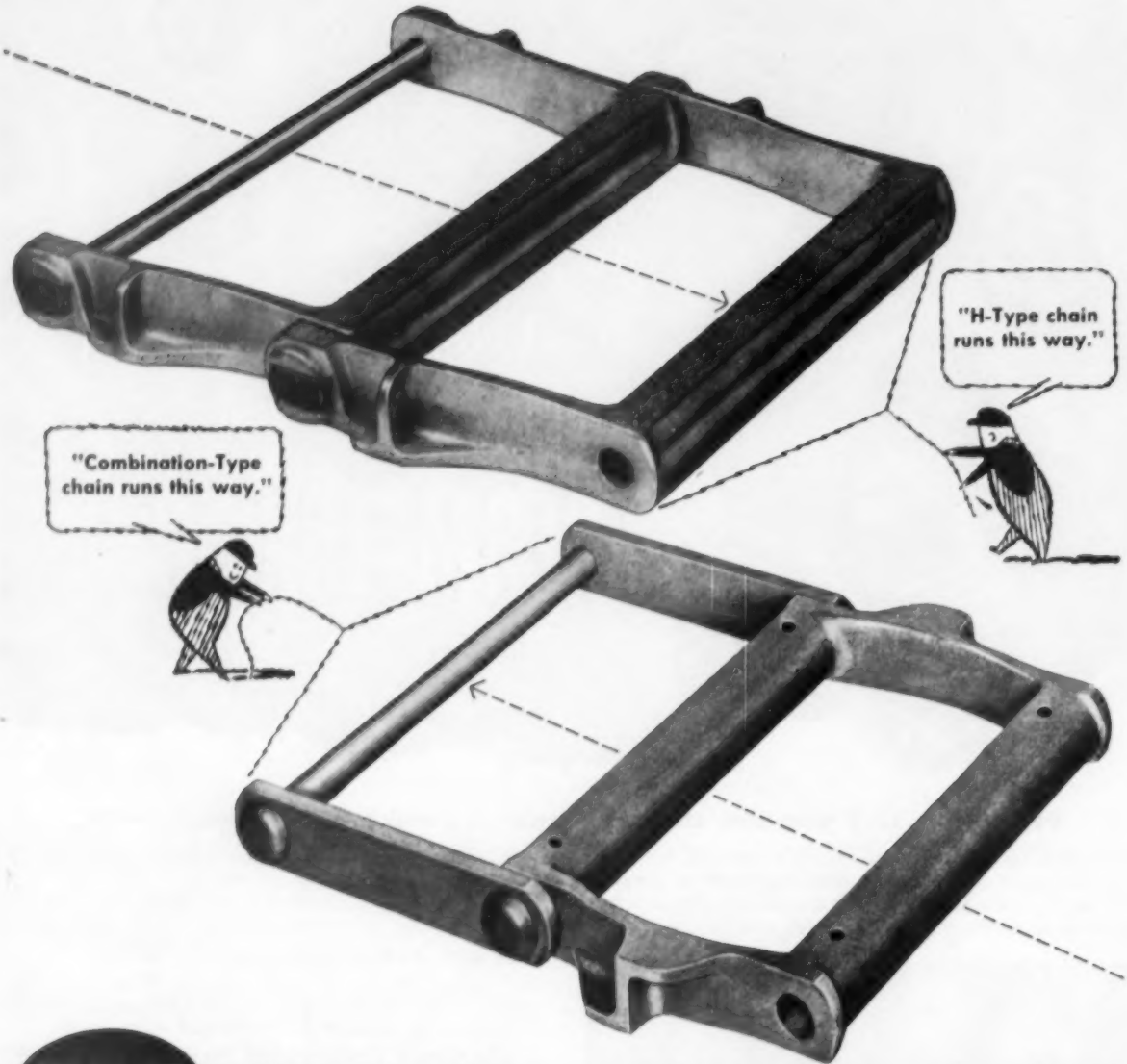

REX® Mill Chains...take your choice

Take your choice between two types of Rex Conveyor Chain—each a proved performer in lumber mill service. They move sawdust, refuse and other mill materials, and operate over the same sprockets and in the same trough. Because of their width (up to 16 inches), they provide great capacity at slow speed.

Rex H-Type Mill Conveyor Chain is the Old Faithful of the industry, and you may wonder why there is also Rex Combination-Type Mill Conveyor Chain. It's because we have learned to make a chain that we think is a little better than the very good H-Type. Combination-Type has larger diameter rivets, steel strap connecting links and securely locked pins. This means less corrosion fatigue, higher working loads and ultimate strengths—plus the ability to weld attachments to the connecting link. Combination-Type is the chain to cope with today's expanded operating requirements.

H-Type or Combination-Type—take your choice. You'll have a chain that will live long and do your job as it should be done. For all conveyor and drive chains for mill service, see your CHAIN Belt Distributor. CHAIN Belt Company, 4653 West Greenfield Ave., Milwaukee 1, Wisconsin.

CHAIN BELT COMPANY

Milwaukee 1, Wisconsin

clear-span Soulé Buildings

SERVE MILL AND WOODS OPERATIONS BEST

More Space — the post-free interiors of Soulé Buildings give more usable work area — important when you're handling logs. Clear-span frames help you plan more efficient chain, mill or plywood plant operations. And if you are warehousing forest products, you can store more in post-free Soulé Buildings. **Mobility** — Soulé Buildings bolt together quickly right in the field. There's no welding or riveting. When your site moves, you dismantle your Soulé Building, move it and re-erect it with 100% parts salvage. **Low-Cost** — building parts are mass produced for economy. Standardized design and easy erection with even unskilled labor gives you big savings in initial cost. And rugged Soulé Buildings need little or no maintenance.

Inquire about low-cost Soulé Buildings for your lumber application.

Soulé
LEADER IN STEEL BUILDINGS

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Seattle 4100 West Marginal Way, HOlly 3600
Spokane East 41 Gray Ave., Riverside 7-8063
Phoenix 2026 South 11th Avenue, ALpine 3-3178
Salt Lake City 220 Greyhound Bldg., EMpire 3-7601

4121

This mobile Skagit logger is powered by a compact Cat D326 Engine, sturdy enough to stand up under the jolts of rough going and with plenty of power to prevent "hang-ups." The rig's on the job 8 to 10 hours a day, 5 days a week.

Why V & K Logging Co. specified

CAT* power for this mobile rig

When the V & K Logging Co., Stayton, Oregon, decided to add this mobile Skagit yarder-loader to its equipment line-up, the only engine considered for it was a Caterpillar Diesel. Here's why, in the words of partner George Vinson: "We have used Caterpillar Diesels on our logging operations for a long time. We know what they can do. That's why we insisted that our new mobile logger be powered with a Cat Engine."

There's nothing like experience as a basis for choice. Time and again, Caterpillar power is specified because of the outstanding on-the-job performance of other Cat Engines. Production figures show that they do a money-making job, not only when they're new, but year after year after year.

Quick response for yarding

In this rig, there's a D326. Like all Caterpillar Diesels the D326 is compact, sturdy and has quick response and good lugging ability to prevent "hang-ups" when yarding. And it can use non-premium fuel without fouling. That gives you a 3-way saving—cheaper fuel, less of it and a minimum of maintenance.

Planning to modernize your equipment? Check the advantages of specifying Caterpillar power. Engines are available up to 520 HP. Your Cat Dealer can install them in your present equipment, or leading manufacturers can supply them in new equipment. Remember, wherever you are, you're backed by prompt service from your Caterpillar Dealer. Ask him to show you how Cat power can pay off for you.

Caterpillar Tractor Co., San Francisco, Cal.; Peoria, Ill., U.S.A.

CATERPILLAR*

*Caterpillar and Cat are Registered Trademarks of Caterpillar Tractor Co.

MODERN HEAVY-DUTY LOGGING POWER

8,300-ton Multiple Opening Steam Platen Press. Designed for the manufacture of 48" x 192" dry process hardboard. A feature of this press is the self-contained hydraulic pump and control system. R. D. Wood makes presses of many sizes and types for the manufacture of wet or dry process hardboard, and also plywood. Write for catalog and engineering information—without obligation.

You'll like what it does to production

It's just plain common sense—when your down-time decreases your production is bound to increase. Down-time can't be eliminated, but R. D. Wood Presses hold it to a minimum. The sound design, choice materials and careful craftsmanship that go into a Wood Press produce a superior product—a dependable, smooth-working press that can't help but increase production records. Write for our catalog and engineering information—no obligation.

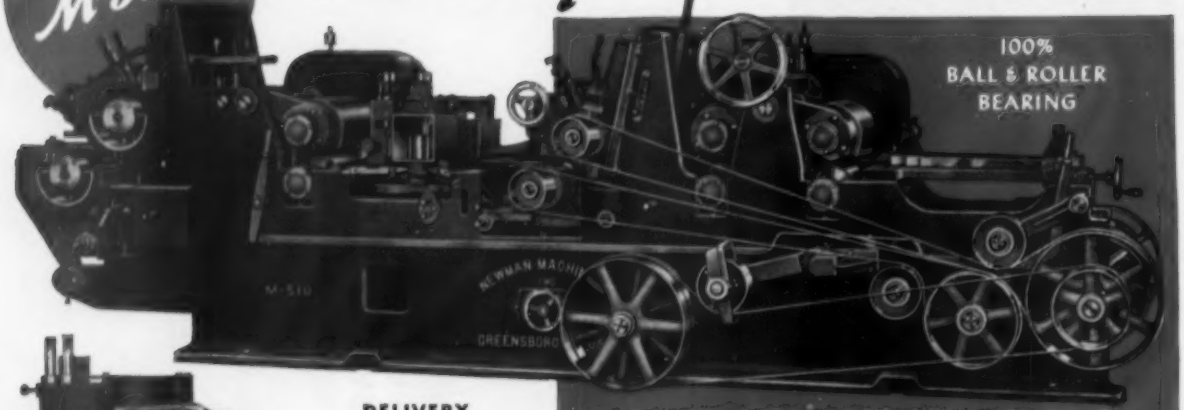
R. D. WOOD COMPANY

PUBLIC LEDGER BUILDING • PHILADELPHIA 5, PENNSYLVANIA

A New 10" Roll PLANER & MATCHER with feeds to 250 feet per minute

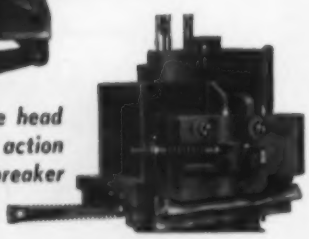
Newman M-510

A medium priced machine with every desirable feature

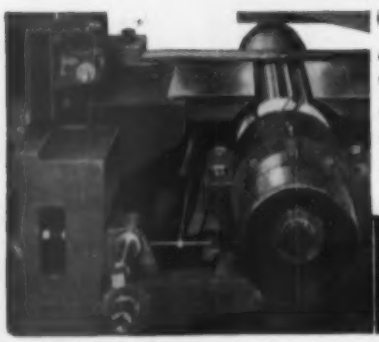


Heavy duty side head units of long quill design

DELIVERY FROM STOCK ***IF YOU HURRY***



Left side head double action chipbreaker



Massive vibration free bed plate after bottom cylinder

- Simultaneous roll raising device for front bottom feed rolls
- Quick release for pressure bar
- Quick release for left side head
- All Sprockets steel—heat treated
- Flame hardened bottom bed plates and pressure bar
- Feed works reversible
- Wear resistant rigid solid steel long guide
- Chatter proof jointer units
- Roller knife setting gauge available

Newman Machine Co., Inc.

GREENSBORO, NORTH CAROLINA, U. S. A.

significant industry news

WILLAMETTE VALLEY BUYS L. H. L. . . . Willamette Valley Lumber Co., Dallas, Ore., has purchased the L. H. L. Lumber Corp., Carlton, Ore., for $6 million. The purchase includes the sawmill, producing 185,000 feet a day, timberland and logging equipment. Willamette will continue operation of the sawmill, will add a $500,000 veneer plant.

SASKATCHEWAN PULP MILL PLANNED . . . A group of California business men has been authorized by the provincial government of Saskatchewan, Canada, to build a $40 million pulpwood plant northwest of Prince Albert. The group is headed by Ellis E. Patterson, former lieutenant-governor of California. The Saskatchewan government has granted the Americans an option on 12,000 square miles of crown-owned timber under an agreement by which the Americans will start construction on a wood pulp mill with minimum capacity of 300 tons a day before September 1.

CROWN ZELLERBACH TIMBER CHIEF . . . Otis D. Hallin has been appointed assistant vice-president for timber, Crown Zellerbach Corporation. He formerly served as vice-president for timber, Crown Zellerbach Canada, Ltd., Vancouver, B. C. Hallin has 31 years' experience in industrial timber work in the Pacific Northwest and western Canada. He joined C-Z in 1933 at Port Angeles and headed the timber department before joining the Grays Harbor division, Rayonier, Inc., in 1935. He rejoined C-Z in 1943, took over the Canadian post in 1949.

B. C. OLDTIMER RETIRES . . . Norman English, well known logging executive in British Columbia, has retired as general manager of logging for the Powell River Co., but will continue with the company on special assignment for the remainder of the year. He will be succeeded by C. C. Smith who has served as assistant logging manager.

NEW J. NEILS MANAGER AT KLICKITAT, WASH. . . . Paul Wonderly has been named general manager at Klickitat, Wash., for the J. Neils Lumber Co., division of St. Regis Paper Co. Wonderly is new to the Neils organization, is a veteran in the lumber industry with background in sales, plant operation and executive responsibility. He most recently was president of Portola Tree Farms, Grants Pass, Ore. He succeeds Walter H. Rathert who is now president of J. Neils, succeeding Paul Neils who is chairman of the board.

WEST AFRICA INSTALLATION SOLD . . . J. Gliksten & Son, Ltd., London, England, has purchased the Mengel West Africa, Ltd., sawmill and lumber concessions in Ghana. The firm will continue to supply lumber and veneer from Ghana to the Mengel Company in the United States. Gliksten has substantial holdings in Ghana, but this acquisition will double its production capacity.

THE LUMBERMAN WINS SAFETY AWARD . . . The National Safety Council has honored THE LUMBERMAN with one of its 1956 Public Interest Awards. The noncompetitive award is made annually to public information media for exceptional service to safety. THE LUMBERMAN was also a winner in 1955.

NEW WHOLESALE LUMBER DIVISION . . . Springfield Millwork Co., Inc., Springfield, Mass., has established a wholesale lumber division under the direction of Robert B. Cowles. The new division will market a complete line of western, Inland Empire and southern lumber in five New England states and eastern New York State. Product specialization will be Douglas fir, sugar and ponderosa pine, red cedar shingles and siding, western white spruce and oak flooring.

O&C MARKETING RESTRICTIONS WERE ABOLISHED by the Department of Interior early in April. Edward Woozley, director of the Bureau of Land Management, said the decision was based on the belief that such action would directly and indirectly benefit more independent communities and industry than would be injured, and that any possible injury will be minor. He emphasized that such action will in no way affect sustained yield forest management on the 12 master units.

HAROLD E. ANDERSEN has been transferred by the U. S. Forest Service from Juneau, Alaska, to Sandpoint, Ida., where he will serve as assistant supervisor of the Kaniksu National Forest.

KALPINE PLYWOOD CO., Klamath Falls, Ore., closed last fall for the winter season, will not reopen and will be put up for sale. The plant is owned by Plywood, Inc., a subsidiary of Atlas Plywood Corp., Boston, Mass.

A NEW NAME, HUNT FOODS & INDUSTRIES, INC., has been adopted by Ohio Match Co. Management proposed the change to indicate the company's diversification of business interests resulting from the merger of Hunt Foods, Inc., into Ohio Match Co.

J. S. GORDON CLARK, a director of Churchill & Sim, Ltd., London, England lumber agents, has been elected president of the Timber Trade Federation of the United Kingdom.

POST FALLS LUMBER CO. will construct an electric band sawmill at Post Falls, Ida. The proposed mill will have a capacity of 35,000 to 40,000 feet, will be completed late in the fall or early 1958.

FRAYNE G. GORDON is the new manager of the Hammond sawmill division, British Columbia Forest Products, Ltd., Vancouver, B. C. He succeeds Frank H. Pendleton who has resigned. Gordon has served as assistant to the manager of manufacturing with B. C. Forest Products since 1955.

A NEARLY COMPLETE changeover of officers was voted by members of Olympic Logging Conference in Victoria April 4-5. Elected for 1957-58 are Chairman J. G. Rucker, chief forester, Simpson Logging Co., Shelton, Wash.; vice chairman C. J. Hopkins, logging manager, Peninsula Plywood Corp.; secretary-manager John Barinaga, Crown Zellerbach Corp.; and sergeant-at-arms Bob Fox of Fox Logging Co. Last three are from Port Angeles, Wash. Dave Kurtz, manager of Aloha Lumber Co., was next in line for the chairmanship at the time of his death several months ago.

WARREN TIMBER PRODUCTS, INC. is establishing a pole and piling plant in Crescent City, Calif., adjacent to the A. C. Dutton Lumber Co. The firm is an affiliate of Southwest, Inc., is managed by Dan L. Lindsley.

R. C. McMILLAN, general sales manager, Canadian Western Lumber Co., is president of Plywood Manufacturers Association of British Columbia for the coming year. New vice president is Rex Humphreys, manager of the Victoria plywood division of B. C. Forest Products Ltd.

HENRY B. JACOBSEN has been named general sales manager for Forest Fiber Products Co., Forest Grove, Ore. Jacobsen most recently was sales manager for the Southwest division of Forest Fiber, headquartering in Los Angeles, Calif.

WEYERHAEUSER TIMBER CO. has purchased the town of National in Washington and other holdings on the southeast slope of Mt. Rainier from Harbor Plywood Corp. The purchase includes all structures in National, 1400 acres of timberland, a system of logging roads, a railway line, logging camp and some private cutover land. Harbor Plywood emphasizes that the sale in no way affects its operations on the harbor.

W. P. VAN DEN BOSCH has joined the staff of Morrill & Sturgeon Lumber Co., Portland, Ore., where he will handle mixed cars, industrial and cutting. He has over 30 years' experience in West Coast lumber business both in mill management sales and in wholesale activities.

BRIAN B. GATTIE has been re-elected president of the Canadian Forestry Association. He is general manager of Western Forest Industries. Re-elected as vice-presidents were J. S. Johannson, MacMillan & Bloedel, T. G. Wright, Canadian Forest Products and H. J. Hodgins, Crown Zellerbach Canada.

A NEW INSULATION BOARD MILL is being built at Chester, England, by J. R. Gordon & Co., Ltd. Panels in one-inch thicknesses and acoustical tiles will form the production, estimated at 30 million square feet annually.

EDWIN W. STEIN, forester on the supervisor's staff of the Lewis & Clark National Forest in Montana, has been named supervisor of the Gunnison National Forest in Colorado. He replaces Samuel E. Defler who transfers to the Payette National Forest in Idaho.

WILLIAM E. LAWSON has resigned as vice-president and general manager of Simpson Redwood Co. Thomas F. Gleed, president of Simpson Timber Co., says he personally will assume management responsibilities for the properties at Arcata, Calif., until further notice.

JOHN L. SEVY has been named supervisor of the Sawtooth National Forest in Idaho, succeeding Charles I. Daugherty. He most recently served as supervisor of the Bridger National Forest in Wyoming.

WILSON M. BEVERIDGE has been transferred to Region 3 of the U. S. Forest Service in Albuquerque, N. M., where he will be assistant in the range management division in charge of juniper eradication and range revegetation. He will be succeeded as supervisor of the Prescott National Forest in Arizona by Richard C. Johnson formerly in the regional office at Albuquerque.

HOWARD HOLLINGSWORTH has been named sales manager and elected a member of the board of directors of Empire Wholesale Lumber Co., a subsidiary of Brown-Graves Co., Akron, Ohio. Hollingsworth has been with Empire since 1954, previously spent two years with Brown-Graves.

ABITIBI CORPORATION personnel changes include: O. B. Eustis, with the firm since the first of 1957 and previously with U. S. Gypsum and Oregon Fibre Products, Inc., as mill manager; E. J. Schultz, with the firm since 1956, and formerly in sales with U. S. Gypsum and Reynolds Metal, as general sales manager; A. J. Auden, in the industry since 1920, with Abitibi since 1928, as woods manager; and F. R. Boynton, formerly assistant treasurer and assistant controller for Abitibi Power and Paper Co., as controller and assistant treasurer.

E. W. CAREY has been named vice-president of Fibreboard Paper Products, San Francisco, Calif. He has 30 years' experience in the industry, and long experience with U. S. Gypsum Company.

MALCOLM K. PETERSON has been named to the newly created post of director of merchandising of United States Plywood Corp. He has been with U. S. Plywood for 10 years, most recently as northeast division manager.

SALE OF 40 MILLION FEET OF TIMBER in Washington for $1.3 million has been accomplished. Pacific Power & Light Co. purchased the timber at the site of its Swift River power project. It will sell the timber to clear the way for a 12-mile reservoir, will return to the state any money received in excess of its $1.3 million purchase price. The price paid for the timber is believed to be the largest ever received by the state for a single tract.

GERALD E. MITCHELL, formerly in charge of forest service road, trail and landing fields projects in Region 1, has been named assistant regional forester at Juneau, Alaska where he will be in charge of engineering in the Alaska region.

A CENTRAL RESEARCH DEPARTMENT has been established by Simpson Timber Co. at Seattle, Wash., to work on company-wide projects in Washington, Oregon and northern California. It will be headed by C. H. Krienbaum, vice-chairman of Simpson Timber. The department will deal with company-wide forestry and marketing projects and with chemical research in pulp and paper, will coordinate planning and development work, will assist other research staffs.

E. S. ERSKINE, Erskine Lumber Co., Swisshome, Ore., has been elected president of the Western Forest Industries Association. Other officers include Leo Rickard, Rickini Lumber Co., Cottage Grove, vice-president, and Aaron Jones, Seneca Lumber Co., Eugene, secretary-treasurer.

R. H. RHEINBERGER, formerly forester for Pope & Talbot, Inc., at Port Gamble, Wash., is now timber evaluation engineer for United States Plywood Corp., Washington division.

A PICKUP IN SOFTWOOD PLYWOOD during March and April has prompted major western producers to return to a 5-day week after six weeks of operating only four days. Cascades Plywood Corp., U. S. Plywood Corp., and Georgia-Pacific Corp. are again on a 5-day schedules and other industry members are expected to follow. Increased orders over a four-week period . . . at more than 120 million square feet a week they easily exceeded production which was at about 80% of industry capacity . . . prompted the move. Unfilled orders had climbed to 337 million square feet at the end of the first week of April, compared to 264 million square feet a month earlier.

LLOYD G. GILLMOR has been promoted to the staff of the division of timber management in the region headquarters of the Pacific Northwest region of the U. S. Forest Service. Since 1953 he has been on the staff of the forest supervisor, Fremont National Forest, has been in charge of timber management activities on the forest.

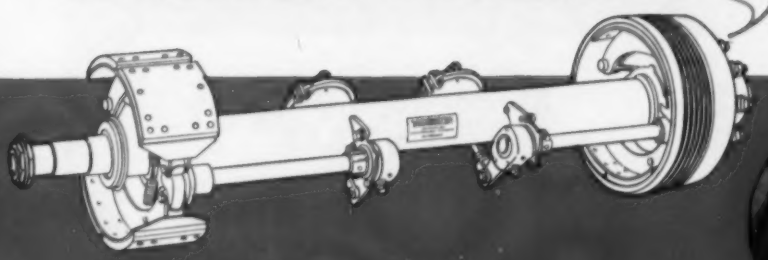
POPE & TALBOT, INC., plans to have its new particle board plant at Oakridge, Ore., in operation in June. It will be located adjacent to the Oakridge sawmill, will utilize mill and logging residue material.

"You Get All The Brakes"

when you choose TDA's® TK-500 Series

LIGHTWEIGHT Trailer Axles

the only lightweight, heavy-duty trailer axles offered with "P" brakes in a full range of sizes!



Free moving brake shoe roller
Hardened steel rollers and open web shoe construction guarantee free movement. No chance of freeze or brinelled rollers!

Self aligning camshaft brackets
Assure correct camshaft alignment and balanced brake application . . . nylon bushings are famous for long life with minimum maintenance.

Rustproofed chrome-plated anchor pins
with simplified construction. Give lighter weight with maximum strength . . . simplify maintenance.

Deep case induction hardened cam surfaces
Insure long camshaft life and smooth, safe stops!

Timken® "P" Series Brakes

The popular Timken-Detroit® TK-500 Series Lightweight Trailer Axles are available with a complete line of famous Timken "P" Series Brakes . . . ranging in width from six to ten inches (6", 7", 8½" and 10"). All are 16½" in diameter.

They feature the exclusive Timken "Econo-liners" tapered brake linings (thickest where wear is greatest), low maintenance nylon bushings, and rigid open type one-piece flange and spider that gives cooler running and longer lasting brakes. Ask your trailer dealer for detailed specifications.

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TIMKEN Detroit AXLES
ROCKWELL SPRING AND AXLE COMPANY

Accepted TDA Standard

Plants at: Detroit, Michigan • Oshkosh, Wisconsin
Utica, New York • Ashtabula, Kenton and Newark, Ohio • New Castle, Pennsylvania.

World's Largest Manufacturer of Axles for Trucks, Busses and Trailers

Accurate Rugged Dependable

KLAMATH MACHINE
LINE BAR

The KLAMATH MACHINE Line Bar is self-contained, heavy-duty, trouble-free. It is equipped with one fluted and four spiral feed rolls, two power driven press rolls, rack and pinion type set works. If desired, press rolls may be provided with an air cylinder for power opening, so that the Line Bar can be used as an edger to split boards from 1" to 24" in thickness. *More detailed information will be sent promptly on request.*

ASK FOR THIS *NEW* CATALOG

Our Catalog carefully describes and illustrates the Line Bar. The full line of KLAMATH MACHINE Sawmill Machinery is described and illustrated in this *new and carefully prepared* CATALOG. A copy will be sent to responsible sawmill operators on request.

KLAMATH MACHINE & LOCOMOTIVE WORKS INC.

P. O. BOX 208 • KLAMATH FALLS, OREGON, U. S. A.

Look for the Indian Head on all **KLAMATH MACHINE** *products*

Export Division: FRAZAR & HANSEN, Ltd., 301 Clay Street, San Francisco 11, California, U.S.A.

High grade sharpening for high speed steels

SAWS — Circular and Band

KNIVES

CUTTERHEADS

32 ALUNDUM* G Bond wheels protect saws, knives, cutterheads with the "TOUCH of GOLD"

32 ALUNDUM abrasive is over 99% fused alumina, purest of its type. And each grain is a single crystal, with many sharp points all over its surface.

The vitrified G Bond holds grains just long enough for maximum cutting action. Then it lets go, enabling fresh, sharp grains to keep the wheel's grinding surface unusually keen.

RESULTS: Wheels made of this outstanding abrasive-and-bond combination grind fast, free and cool, with few dressings and long wheel life . . . Saws, knives and cutterheads sharpened with it get top protection from heat damage, cut like new and stay sharp with less sharpening . . . Mills use it to keep production efficiency high and sharpening costs low

See your Norton Distributor for aid in selecting the wheels that will add the profit-boosting "Touch of Gold" to your sharpening and production operations. Ask him for Catalog 1052 or write to NORTON COMPANY, Worcester 6, Mass. The Norton grinding wheel plant at Santa Clara, California supplies West Coast distributors with all 32 ALUNDUM wheels and other types used by the lumber industry.

W-1788

NORTON

ABRASIVES

Making better products . . . to make your products better

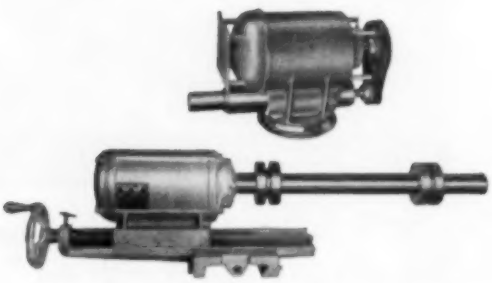
NORTON PRODUCTS: Abrasives • Grinding Wheels • Grinding Machines • Refractories

BEHR-MANNING DIVISION PRODUCTS: Coated Abrasives • Sharpening Stones Behr-cat Tapes

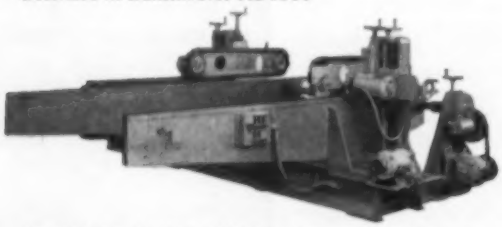
*Trade-Mark Reg. U.S. Pat. Off. and Foreign Countries

10 ways to cut costs with MEREEN-JOHNSON WOODWORKING

No. 442-MT COMBINATION SAW—A versatile machine for ripping, cross-cutting, grooving, dadoing, beveling and mitering. Cuts up to 48" wide and rips up to 50" wide. Handles large stock easily. *Described in Bulletin No. 442-MT.*

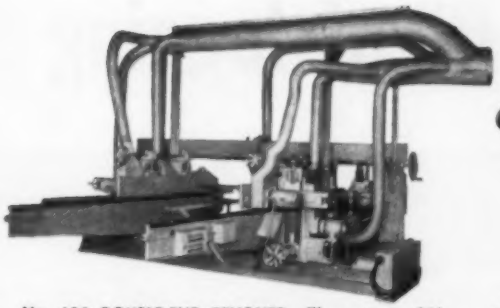


SAW MOTORS—Motors for special applications 3600 RPM or patented offset high speed spindle as illustrated. Unusual shaft extensions open or TEFC 1 to 25 HP. Also mounting slides, etc.

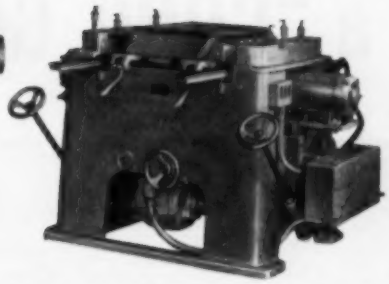


No. 600 DOUBLE CUT-OFF SAW—Accurate production at high rates of feed. Labor saving attachments such as cope motors, dado arbors and other equipment are available for specific needs. Larger sizes available. *Described in Bulletin No. 600.*

No. 477 CUT-OFF SAW—Capacity equals two or three swing, straight line or roller carriage cut-off saws—depending on type and condition of stock used. An excellent machine for box work. *Described in Bulletin No. 477.*

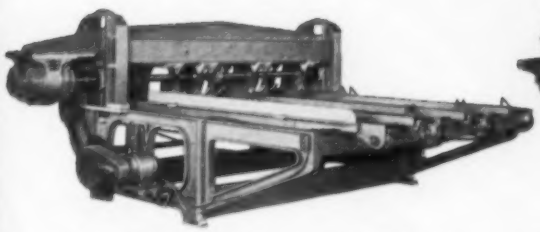


No. 400 DOUBLE-END TENONER—Sizes up to 20′ to fit your requirements. Will square-cut up to 96″ ahead of trim saws. Numerous accessories to multiply its usefulness. *Described in Bulletin No. 400.*

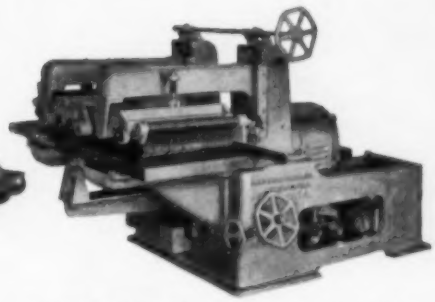


No. 326 MATCHER-JOINTER—For sash and door, furniture and box factories—as well as for many special uses. Adaptable for jointing hogshead staves. Unequalled for "T" and "G" work. *Described in Bulletin 326.*

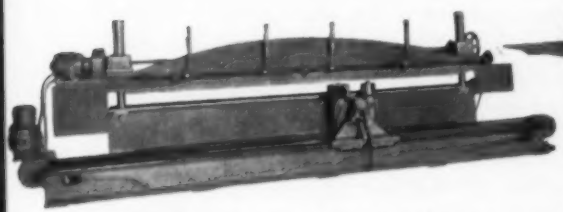
MACHINES



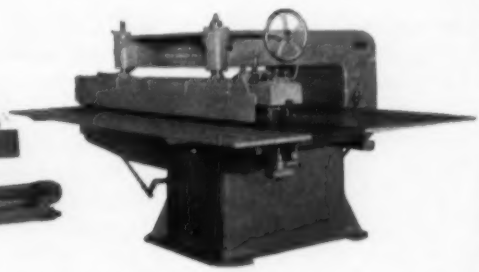
No. 435-H MULTIPLE CUT-OFF SAW—Cuts long boards into short pieces . . . will square cut large size sheets . . . and will cut any number of grooves. Excellent for sizing plywood. *Described in Bulletin No. 435-H.*



No. 441-A GANG RIP SAW—For fast production on difficult gang ripping jobs. Eight power driven feed rolls...12″, 19″, or 24″ saw space. Up to 150 HP. Variable feed drive up to 300 ft. per minute. Glue joint accuracy. *Described in Bulletin No. 441-A.*



VENEER JOINTER—Traveling head principle eliminates shifting. Perfectly joints bundles of veneer up to four inches thick. Sizes from 90″ to 212″. *Described in Jointer Bulletin.*



VENEER SPLICER—Makes precision tapeless joints. Adjusts automatically for varying thickness of veneer normally fed through machine. Welded steel frame with 49″ throat clearance at right. *Described in Bulletin No. 50.*

SEND
BULLETINS AS CHECKED

BULLETIN 400

BULLETIN 326

BULLETIN 435-H

BULLETIN 441-A

BULLETIN 442-MT

JOINTER BULLETIN

BULLETIN 50

BULLETIN 600

BULLETIN 477

RESAW BULLETIN

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Mereen-Johnson MACHINE CO.

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Name_____

Address_____

City_____ State_____

Firm_____

J. E. Blankenship
Crossett, Arkansas

How D4s help him make a "GOOD GO" of logging

All the skidding for Mr. Blankenship's production of 5,500,000 bd. ft. a year is done by two D4s with Hyster pans. A D6 with Bulldozer is used for piling logs and building roads.

These two CAT* D4 Tractors with Hyster pans skid about 5,500,000 bd. ft. a year for J. E. Blankenship, who does contract logging for Crossett Lumber Co. They work ten hours a day, five days a week, all year around. Here they're skidding in sandy clay mud the day after a storm. On a one-mile round-trip haul, they're averaging two loads each an hour, with from 700 bd. ft. to 800 bd. ft. a load.

For seven out of his twelve years of logging for Crossett, Mr. Blankenship has used Caterpillar-built equipment. So he has a real basis for comparison when he says: "I have found the D4 and skid pan the best thing to log with. I don't know a cheaper way to get my logs out. We work in any weather and I think the reason I have made a good go in my work is because of their low-cost operation."

Economy of operation is just one key to the D4s' money-making performance. Their rugged construction enables them to *produce* day after day, even in tough going. Rugged construction: Here are a few of many examples: A massive steel brace securely welded to the track roller frame maintains good track alignment under all conditions. Efficient roller, idler and sprocket bellows seals keep lubricant in, and mud out, for a longer life of trouble-free operation. And a one-piece forged steel drawbar mounted well to the rear and slightly above the lowest portion of the tractor provides better leverage and stability for drawbar work.

As a result of attention to important details like this, you can count on *more* work at *lower* cost from a D4 than any competitive unit. What's more, you're backed by fast, efficient service from your Caterpillar Dealer *wherever* and *whenever* you need it. Ask him to show you how the D4 can step up your production and profits!

Caterpillar Tractor Co., Peoria, Illinois, U.S.A.

CATERPILLAR*

*Caterpillar and Cat are Registered Trademarks of Caterpillar Tractor Co.

USE CAT EQUIPMENT FOR MONEY-MAKING PRODUCTION

California Firms Win Safety Awards

• The Diamond Match Company, Chico, Calif. won the California Lumbermen's Accident Prevention Association Industry Safety Award, at the annual meeting held in San Francisco, March 15.

Second place was won by the Willits Redwood Products Co., Willits, Calif. Third place went to Union Lumber Co., Fort Bragg.

This perpetual trophy, won in 1955 by the Fruit Growers Supply Co. at Susanville, was presented to Diamond Match Safety Director, Wally Harris, by CLAPA district competition chairman, Chas. Doe, for the low safety index of 19.15.

The Diamond Match Company also won the Mt. Shasta district award.

Other district award winners were: *Mother Lode district*, Michigan- California Lumber Co., Camino; *Feather River district*, (undecided); *Mt. Whitney district*, Pine Logging Co., Fresno; *Johnson Redwood district*, Willits Redwood Products Co., Willits.

For the past several years, member companies have consistently produced lower average accident frequencies than the lumber industry as a whole. Estimated California lumber industry frequency for 1956 was 63.7. A high average frequency of 58 in 1951, brought down to a low frequency of 39 in 1956, indicates the large reduction in the number of disabling injuries within the membership group.

Herb McMahon, Ralph L. Smith Lumber Co., Anderson, Calif. was elected president to replace retiring president Orman H. Oak, Union Lumber Co., Fort Bragg.

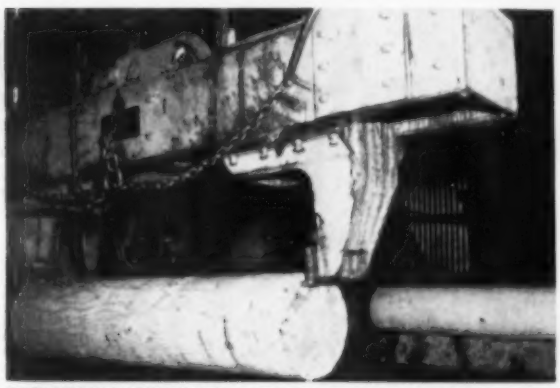
New vice president is Paul Marshall, Simpson Redwood Co., Arcata. Re-elected secretary is D. N. Edwards, Oakland, Calif.

"LUMBER! LUMBER! LUMBER! — AND NOBODY HAS A TOOTHPICK!!!"

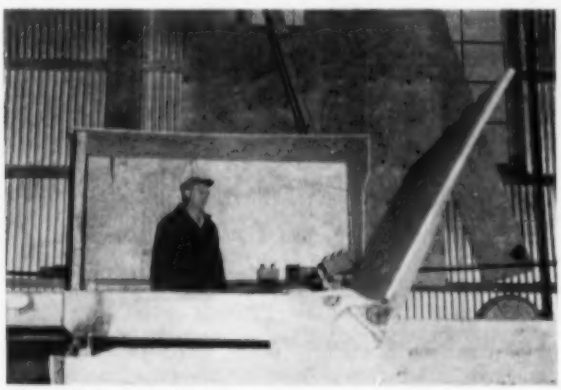
Plywood Safety Story Told in Pictures

• At Three Rivers Plywood & Timber Co., Darrington, Wash., safety is as much a part of plywood production line as any machine in the plant. Management's thinking is reflected not only in mechanical safeguards around machines but also in its appointment of Supt. George R. Morris as chairman, plant safety committee.

A number of Three Rivers' safety ideas are pictured here. Other facilities not pictured include hand rails, guarded switches, toe boards, walkways overhead and signal lights. Pictures are courtesy Leo Miller, recently retired general safety inspector for the Washington Dept. of Labor & Industries at Everett.

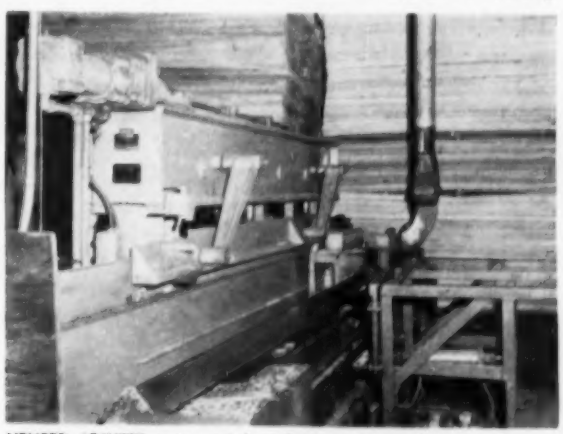


OPERATION BACK-ACHE has been eliminated in handling of short peeler cores. Hazardous manual work formerly required in centering cores for further peeling now is done by remote control.



UNTOUCHED BY HUMAN hands might be slogan for this phase of panel grading where plywood is turned over mechanically. Operator stands in safe position while panel continues on for stacking.

TRIMMERMAN IS positioned well back of plywood panel trimmer saw. Note push-button control panel at his right. Design of Darrington plant has sufficient floor space for all machines.



VENEER JOINTER puts straight edge on strips of veneer for taping, has cutting blade completely covered during operation. Plant is isolated, depends on volunteer fire department for first aid.

ALL OPERATIONS ARE COMPLETELY INDEPENDENT — In addition to eliminating shifting time, Independent-Travel allows the operator to swing and hoist the load while traveling in either direction. This saves time loading or unloading odd length logs from truck or rail car. The operator quickly spots loader where he wants it without having truck driver reposition his truck.

Getting 9 hours' output in 8

Independent-Swing-and-Travel is available on 11 Link-Belt Speeder models. Eliminates shifting, saves 20-30 seconds each move

Link-Belt Speeder users are setting new high-production standards by equipping their shovel-loaders with *Independent-Swing-and-Travel*. Why? It eliminates time losses ordinarily occurring when the operator shifts from swing to travel and from travel to swing. With *Independent-Travel* shifts are eliminated . . . and the machine can swing and travel simultaneously.

If you'd like complete details, proof that *Independent-Travel* can up output . . . cut maintenance and parts cost—see your distributor or write Link-Belt Speeder Corporation, Cedar Rapids, Iowa. 14.500

It's time to compare . . . with

LINK-BELT SPEEDER

MORE USABLE HORSEPOWER — Size for size, Link-Belt Speeder shovel-loaders utilize more of the engines' available horsepower. This bonus pays off in added power at the drum, greater line pull plus extra power to swing, hoist and travel. Although it gets more usable power and line pull out of the same engines used in other shovel-loaders, a Link-Belt Speeder remains well within the engine manufacturers' recommended operating speeds.

Your Factory-Trained Sales and Service Specialists

WESTERN MACHINERY CO., Spokane, Wash.

HOWARD-COOPER CORP., Seattle, Wash., Portland, Eugene, Albany, Roseburg, Central Point, Coquille, Ore.

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EDWARD R. BACON CO., San Francisco, Sacramento, Oakland, Fresno, Calif.

MONTANA POWDER & EQUIP. CO., Helena, Billings, Mont.

PURVES RITCHIE LIMITED, Vancouver, B.C.

Four Mills Join in Program

(*Continued from page* 37)

nozzles at 1500 psi. Each pump is driven by an 800-hp G. E. motor. Western Gears connect the power with the pumps. Water carrying the bark is screened through three drum-type screens before it is dumped back into the Chehalis River. Bark is hogged and mixed with fuel.

Most of the logs going through the barker are 40 feet long. A scaler at the log deck has a pushbutton panel which controls the entire conveyor system and barker. The company also has a Bellingham barker for eight-foot logs in the stud mill.

CONVEYOR BELTS CONVERGE on a central hopper over the chipper, thus bringing chip material from all sources in the mill. An overhead push-button panel installed by Industrial Components, Inc. permits chipperman Marvin Hovis to control movement throughout the department. Control by the two dozen buttons includes the flow of material before and after chipping and the movement of cars being loaded.

The final conveyor belt passes over a large wheel before dropping material into the chipper. This wheel contains a metal detector which stops everything should a piece of metal show up. Chipper is a Norman Model 66, powered by a 300-hp G. E. motor.

Screened out overs go through a small Norman rechipper. Funneled to a Rader Pneumatic, chips are blown to railroad cars or to the truck-loading bunker. Carloads go to Rayonier at Shelton. Truckloads go to Rayonier at Hoquiam as described above.

Electric Carriage Drives

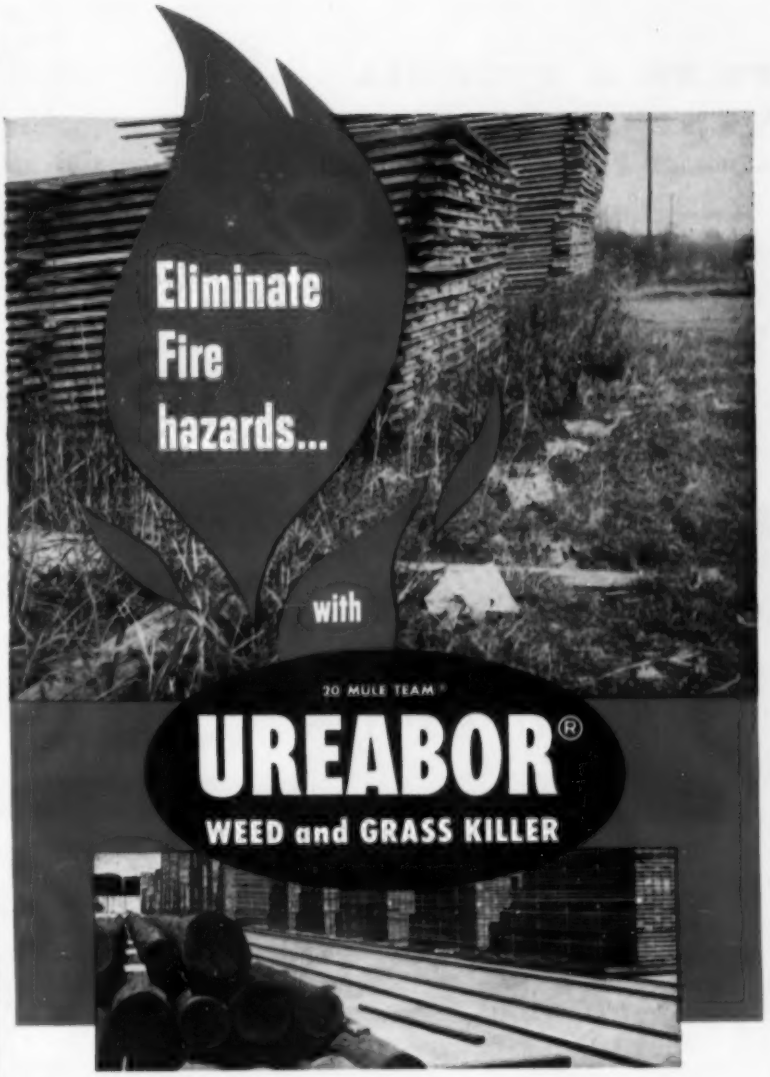
(*Continued from page* 41)

On the basis of these tests and observations it seemed advisable to limit maximum total power surge resulting from the drives to not more than 1000 kw, and motor slip to less than seven percent. This was accomplished by suitable motor design combined with a 6000 hp. second flywheel for each M-G set.

ADDITIONAL ADVANTAGES resulting from the flywheel included a substantial reduction in size and initial cost of driving motors for the M-G sets and a reduction in the new power requirements of the drives, which in turn, reduced the overall operating costs.

Probably design specifications for this application were a little more severe than necessary but expense that would have been involved in correcting a mistake of this nature justified the small additional cost involved in taking a conservative position.

Operating experience over the past three years, shows that at no time during this period have interruptions in the paper making operations been traceable to the log carriage drives.



UREABOR is your easiest way to destroy weed hazards safely and economically! You get full season control of both broad-leaf weeds and grass from a single application. This dust-free granular weed killer is applied DRY—there is nothing to mix ... no water to haul. It is safe to use anywhere; is nonvolatile, nonflammable and noncorrosive to ferrous metals.

UREABOR is concentrated; it combines the plant-destroying action of sodium borates and substituted urea. Only 1 to 2 lbs. per 100 sq. ft. is required for effective control! This low rate is quickly and uniformly applied with a special spreader available for $10.75 delivered, anywhere in the U.S.A. The PCB Spreader is light-weight and sturdy—holds enough UREABOR to treat 2500 sq. ft. at the 1-lb. rate without refilling.

• ***Write today for Service Bulletin 15-W***

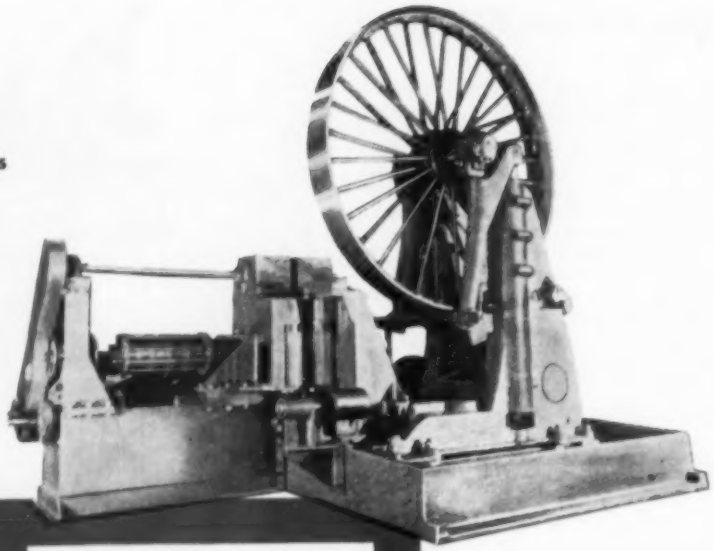
United States Borax & Chemical Corporation
PACIFIC COAST BORAX COMPANY DIVISION
630 SHATTO PLACE, LOS ANGELES 5, CALIFORNIA

FILER & STOWELL VERTICAL RESAWS

Available in 6', 7' and 8' diameter wheels

- **Automatic Push Button Setworks** — For instantaneous change between side and center sawing positions. Simply push a button to achieve any set desired.
- **Extra Heavy or Standard Feedworks**
- **Revolutionary New 2 or 3 Way Lumber Sweep Behind Vertical Saw** — Operated by the vertical resaw operator. Eliminates a man behind the resaw!

Write for Bulletin No. 311



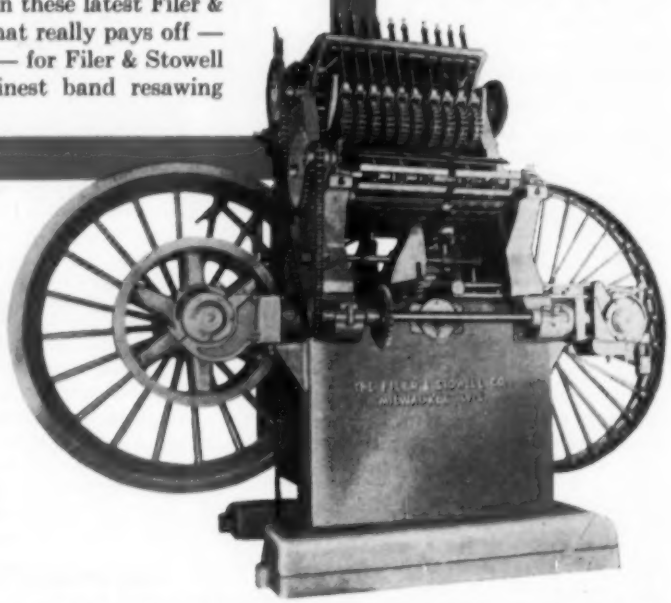
Filer & Stowell 8' vertical resaw with 4 roll extra heavy feed works, arranged for instantaneous shifting between both side and center sawing positions.

MORE PROFITS HIGHER PRODUCTION LESS DOWN TIME

Only FILER & STOWELL RESAWS insure these EXTRA DIVIDENDS year after year!

No other resaws can offer sawmill operators so many fine features — such assurance of high quality and dependability. All the newest developments and labor saving devices wanted by the industry have been incorporated in these latest Filer & Stowell resaws. They're an investment that really pays off — one that you can make with confidence — for Filer & Stowell has been manufacturing the world's finest band resawing machinery for 99 years.

Outfeed or rear view of Filer & Stowell 8' Double Table Horizontal Resaw.



FILER & STOWELL HORIZONTAL RESAW

Available in 6' or 8' diameter wheels

- **Furnished with either single or double tables which can be equipped with disappearing center guide and operated as a single table.**
- **Instantaneous finger lever control of tables**
- **Wheels partially below floor give greater visibility to operators and foremen**

For complete details write for Bulletin No. 312

THE FILER & STOWELL COMPANY

147 E. Becher Street, Milwaukee 7, Wisconsin

1856 A CENTURY OF PROGRESS 1956

SHELL

A worth-while story about Shell men, Shell techniques and

SHELL ROTELLA OIL

Just what the doctor ordered...

for longer engine life

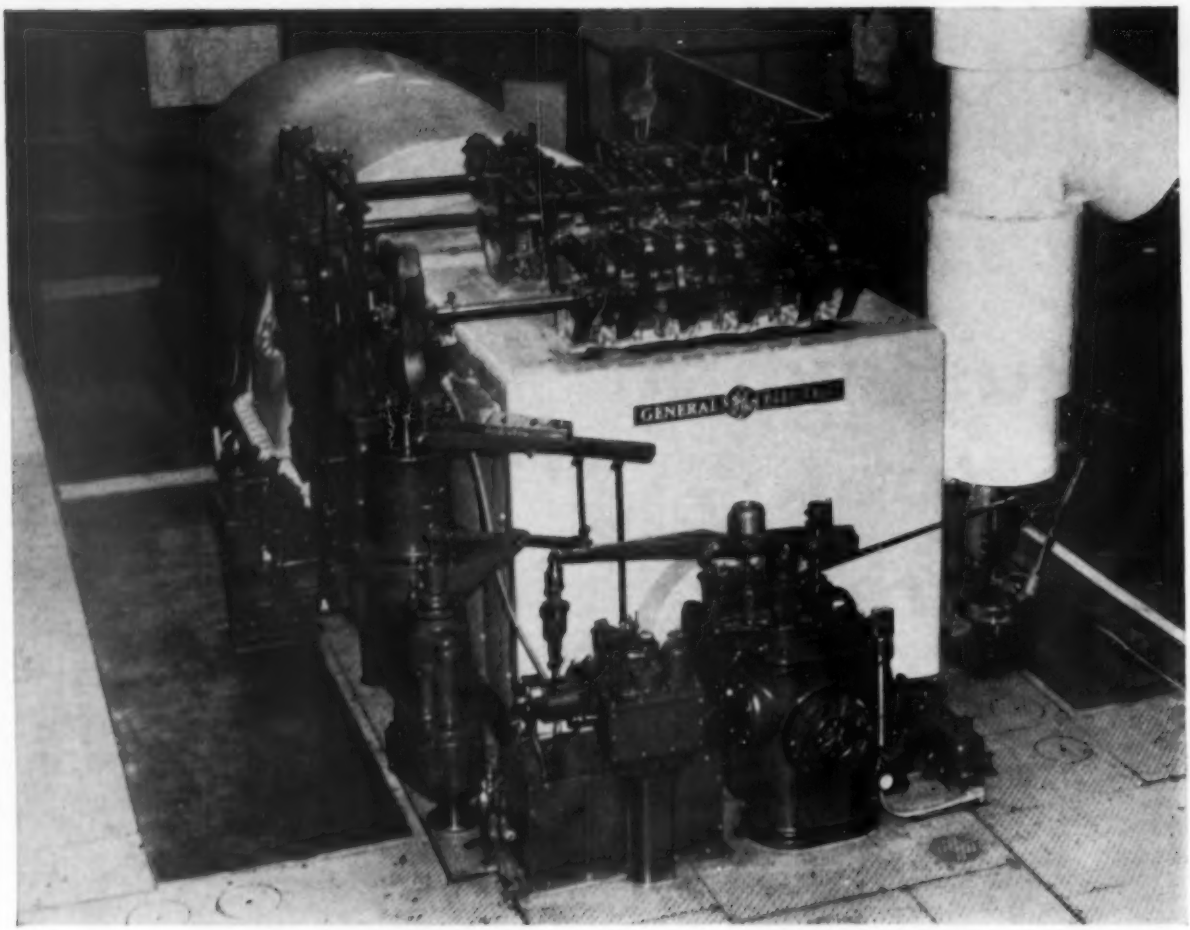
WATCH OUT for harmful acids that form during an engine's combustion cycle. Tests prove these acids can destroy an engine faster than friction.

The remedy? A "steady diet" of the oil that is *specifically designed to stop acid action*, SHELL ROTELLA OIL.

Shell Rotella fights this major cause of engine wear so effectively, it can add years to the life of gasoline and diesel engines, save you money on replacement costs.

This tough, heavy duty oil not only stops acid action, it has detergent-dispersant and oxidation-inhibiting properties that help keep engines *clean* as well.

Chances are Shell Rotella or another Shell product is the right answer to one of your lubrication problems. These fine products are developed by Shell Research – a 1500-man team strong on lubrication experience. Why not put that experience to work this week?



"Years of trouble-free operation"

When you find turbines that have given 20, 30, 40 or more years of efficient operation—without breakdown—you know that a way has been found to protect them against the 3 "nightmares" of turbine operation: foaming, oxidation, and sludging. That way is lubrication with *Texaco Regal Oil R&O*.

In the words of the mill superintendent in charge of the turbine illustrated: "We have found that *Texaco Regal Oil R&O* assures normal bearing temperatures and instant governor response . . . "

This outstanding performance stems from the ability of *Texaco Regal Oil R&O* to retain its maximum lubricating ability as long as it is in service. *Texaco Regal Oil R&O* is especially refined and processed to meet the rigid requirements of all leading turbine manufacturers.

For your hydraulic equipment, the same properties of *Texaco Regal Oil R&O*—preventing rust, sludge, and foam—assure equally dependable, trouble-free performance.

Ask a Texaco Lubrication Engineer to recommend which of Texaco's complete line of lubricants is the correct one for your turbines and auxiliaries. Just call the nearest of the more than 2,000 Texaco Distributing Plants in the 48 States, or write:

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TEXACO

TEXACO Regal Oils R&O

FOR ALL TURBINES

VOLUME 84

THE Lumberman
LUMBER PLYWOOD BOARD WOOD MANUFACTURING

NUMBER 5

APRIL 19, 1957

New Battle of the Boards Faces Industry

AT A TIME WHEN the nation's lumber industry should be united in an aggressive merchandising program which will sell WOOD to homebuilders, against the competitive inroads of metals, plastics and composition materials, we face the threat of another regional squabble between lumber groups.

We refer to the recent petition presented by a regional lumber group, and apparently supported by other groups, to The American Lumber Standards Committee, asking that Article V, Section F —Seasoning and/or Section 8—Size Standards, be amended "to fix the *maximum* moisture content at which minimum American Lumber Standards sizes would apply and what amendment would be most appropriate in the public interest."

Suggestions and recommendations on the matter are to be mailed to the Committee prior to May 1. On May 16 a hearing will be held in Washington, D. C., to consider all testimony. A closed session by the American Lumber Standards Committee will follow the open meeting.

Specific sizes and moisture content involved are not given in the announcement letter circulated by ALSC. It is our understanding, however, that previous discussions by committee members have mentioned 17% and 19% moisture content and one and two inch common yard lumber. It should also be made clear that the petition is separate and distinct from the still-pending issue of whether lumber thickness should be 5/32 inch or ¾ inch.

IF THE 19% moisture content is the yardstick intended, it means that Douglas fir construction lumber, for instance, traditional manufactured and used green, would have to be manufactured and surfaced thicker and wider if present sizes are to apply at the maximum moisture content. Furthermore, even kiln dried Douglas fir would be affected because present procedure is to dry at an *average* moisture content of 19%. Thus KD stock would have to be surfaced to size at a maximum moisture content of 19%.

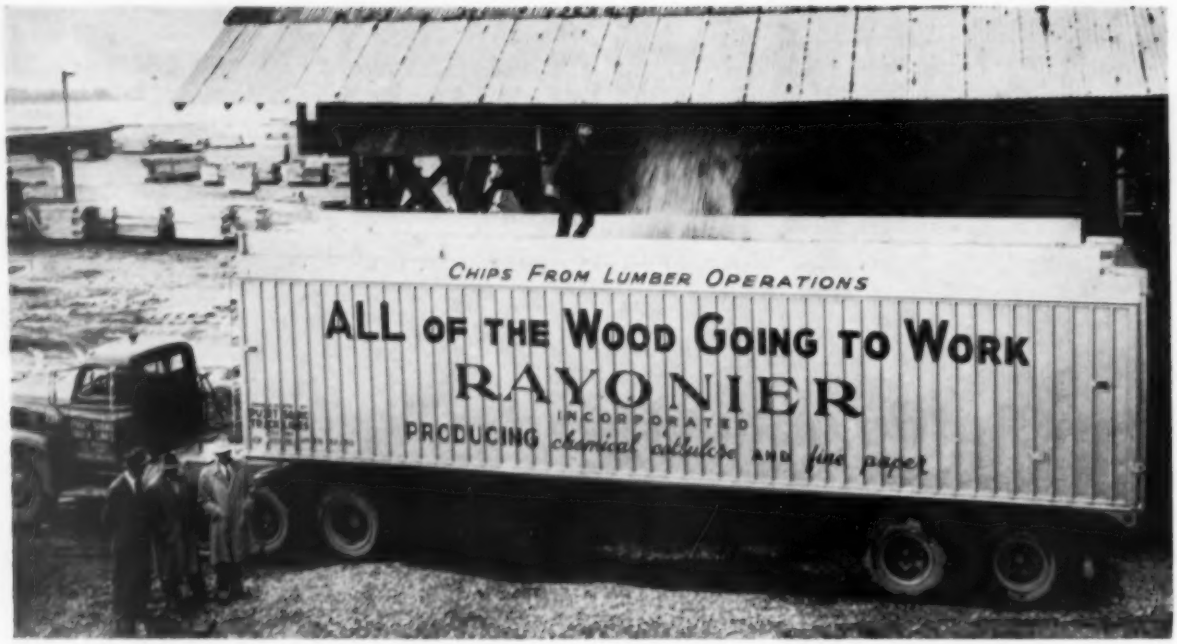
The competitive impact of being forced to oversize Douglas fir lumber and ship the extra weight to eastern markets becomes even more pronounced when freight rates are considered. Hearings on another freight rate increase also are in the offing, at which western regional lumber groups probably will be opposed by southern groups in their request for hold-downs if another rail hike is granted. Estimates now are that oversizing Douglas fir lumber to the proposed lumber standards would add an extra four or five dollars a thousand board feet to production costs, plus another three to five dollars in rail shipping costs on green boards and dimension lumber.

It is also our understanding that literature has been distributed by some regional lumber groups to Better Business Bureaus of the nation, quoting out of context authorities who allegedly state that the use of green lumber in house construction is not a good practice.

The only real beneficiaries of this short-sighted program of running down the merits of different lumber species and their manufactured qualities will be the suppliers of competitive building materials. All they need do is sit on the sidelines while the fray is going on and gather ammunition for an intensified advertising campaign extolling the virtues of steel, aluminum and plastics. They can quote lumber authorities on certain statements which won't foster the use of wood in building houses. When the predicted housing boom of 1960 develops, the lumber industry will have done a beautiful job of cutting its own throat, because it is casting doubt that wood is a good building material.

NO REGIONAL LUMBER group should devote its time and effort to putting shackles on lumbermen in another region, by criticizing manufacturing practices and trying to dictate practices through ALSC which are intended solely to offer competitive advantages to another region.

If the same amount of energy were expended in citing the proved advantages of using WOOD, instead of publicly degrading regional species in national markets, the lumber industry would be doing something constructive. Never was there more need than now for lumbermen to unite, instead of taking potshots at each other from ambushed positions, while competing building materials continue to steal markets which lumber once had exclusively. Let's stop being stupid and sell LUMBER to the nation's homebuilders.



LOAD OF CHIPS being dumped at Rayonier, Inc., Hoquiam, Wash. Truck is owned by Puget Sound Truck Lines and is an International L210 with Freuhauf Trailer. It makes one round trip every hour. The trailer holds 10 units, and takes about 10 minutes to unload.

Four Mills Join in Wood Chipping Program

Grays Harbor, Washington mills combine facilities to utilize their logging and milling residuals.

Rayonier, Inc. Receives Chips from Mills

RAYONIER MAKES EVERY EFFORT to utilize all available residues and salvage wood in the production of chemical cellulose and other products. The sawmill slabs converted to chips at the Grays Harbor operation return higher economic values.

In logging, Rayonier harvests every bit of the tree which is economically feasible to bring to the mill. Research into new methods and procedures of salvage logging also is carried on.

In addition to chips produced in Rayonier's own pulp plant, the plant receives chips from the other three participating plants, at a rate equivalent to 50 million board feet of log scale each year. In the past this raw material source had been burned as refuse or hogged for fuel. The plants have been economically stabilized through this bonus return.

A substantial number of Grays Harbor area residents on weekends pick up small odd-lot pieces of hemlock in the woods to be sold at Blagen's Mill and processed in Blagen's drum barker and small chipper. This is often done on areas that have been logged and relogged. Even the beaches are being combed for solid fibre.

ANOTHER DIRECT RESULT of this utilization development is the large new wood handling plant being erected at Rayonier's Hoquiam unit. The new plant will include a drum barker and will handle material down to 18 inches in length.

Rayonier has been operating a chip dump in conjunction with its own chip plant; chips from the other sources are fed into common hoppers. Puget Sound Truck Lines, a contract hauler, operates three truck and trailer units for the continuous hauling job. Two trailers are Freuhaufs with 10-unit capacity; the third is a new 13-unit Reliance.

The Reliance trailer has a live belt in the bottom for fast unloading. The two 10-unit trailers are unloaded at the chip dump by an overhead bridge crane that raises the front end of the

CHIPPING AIDS CONSERVATION PROGRAM

• Four plants in the Grays Harbor, Wash. area are cooperating in wood salvage and utilization, through a barking and chipping program which utilizes low grade logs and mill residues. The plants are Rayonier, Inc., Blagen Mill Co., Grays Harbor Veneer Corp., all of Hoquiam, Wash., and Anderson-Middleton Lumber Co., Aberdeen, Wash.

• Spearheaded by the Northwest Timber Division of Rayonier, Incorporated, which receives the chip output, the whole development stems from that company's basic conservation policy, which is that all wood harvested from its timberlands should be put to maximum use.

Two Kinds of Raw Material

AT BLAGEN MILL Co., stacks of 8 ft. slabs held with steel stakes and chain, shown left. Material is stacked in racks at mills; when full, chains are fastened and racks are hauled here for chip processing. Below, also at Blagen, are bundles of 4 foot slabs on loading dock, each one containing about one cord.

trailer after it is unhitched. Gravity dumps the chips onto a chain conveyor which empties the trailer in about 10 minutes. Unloaded chips go to a bucket elevator which carries them to bins over the digesters in the pulp plant.

An average of 30 loads are brought in daily. The pulp mill makes 17 cooks per 24-hour day. Each of the five digesters cooks 55 units at a time. Average consumption is about 1000 units per day. Since all three contributing plants are in the immediate area, trucks can make a round trip every hour, allowing a half hour for loading. George A. Holt is general manager of the pulp plant.

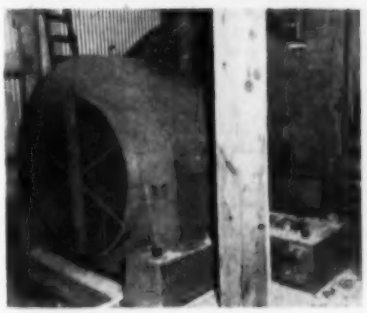
Blagen Mill Co. Employs Hydraulic Slab Barker

TO PRODUCE NON-RESINOUS and clean chips required by Rayonier, the Blagen Mill Co., Hoquiam, Wash., has developed a hydraulic slab barker and a large drum barker. Only hemlock and spruce are chipped.

Blagen started producing chips in the fall of 1951 for a firm in Anacortes. A freight advantage gradually swung production over to Rayonier, which also buys all hog fuel surplus. According to E. H. McIntosh, manager, Blagen Mill has not had a fire in the trash burner since 1945.

The hydraulic slab barker was developed at Blagen Mill in 1953. Slabs include cutback and trimback which ordinarily would be just dunnage. Orders will take 20% to 25% of No. 3 grade, but no No. 4 or dunnage.

Slabs from the daily mill production of 250,000 bd. ft. are barked by the



SUMNER 110" chipper has 22" throat, 300-hp motor, is in bldg. with drum barker at Blagen.

How Material Is Handled

AT BLAGEN MILL Co., steam splitter, top left, reduces material more than 22 inches in diameter, size of chipper throat. Top right: Fibre Making Process drum barker. Diameter 12 ft.; length 45 ft.; the teeth are smooth M bars. Bottom left: Northwest shovel with Mack tongs handles logs from deck to conveyor chain running into cutup department.

AT GRAYS HARBOR Veneer Corp. new Orr-Sembower Powermaster 300 hp boiler is fired with oil, releases veneer residue for chips.

day shift. A night shift works entirely on outside wood. Slabs from other mills come in four and eight foot lengths, the former in cord lots and the latter in 1¼ cord bundles, trucked from as far away as Raymond.

BUNDLES ARE STRAPPED with used steel strapping two inches wide, requiring only the buying of seals. Some eight foot slabs are stacked in racks with steel stakes. Chains are fastened across the top of full racks, which are trucked to the Blagen Mill in a unit. Here bundles and racks are stored on the large loading dock for lift truck handling.

Inside the slab barking department material passes over a long sorting table; seven men pull slabs unsuitable for chips and divert them to the fuel hog. The company-fabricated barker feeds at 400 linear feet per minute. A Bingham pump supplies 187 gallons of water per minute at 1600 psi. A merry-go-round on the barker's offbear side diverts slabs, now cut to four feet, to the chipper or back through the barker. Pieces still bark-covered are stacked in a corner and cleaned off with a hand axe as time permits. Bark goes to the fuel hog. A four per cent rot content in chip material is permissible.

The 72-inch Sumner chipper has two 400-lb. anvils and the wheel carries 32 knives. Knives are changed every four hours. Length of bevel on knives determines length of the chips. Ninety per cent of the chips average the desired length of ¾-inch.

Two Link-Belt packer screens, each of 30 units per hour capacity, separate overs and fines. Overs are re-chipped; fines go to the fuel hog. Chips are conveyed to an outside double bunker, which loads a truck on either side.

THE NEW COMBINED DRUM BARKING and chipping facilities are contained in a common unit. Only the screening and bunker facilities are shared with the slab barking department. This plant utilizes salvage and small logs up to 22-inches in diameter. This is the common dumping ground for all salvage activity in the Grays Harbor area. A Northwest shovel equipped with Mack tongs handles logs from the dry deck to a conveyor chain running into the cutup department.

A six-foot cutoff saw, advanced and retracted on a company-made frame by a steam cylinder, reduces logs to four foot lengths. Inferior chip material goes directly to fuel hog. Pieces under 22-inches in diameter, size of the chipper's throat, are conveyed to drum in adjacent building. Pieces larger proceed by merry-go-round to a steam splitter for reduction. Logs are split horizontally against a concrete block while on conveyor chains.

The Fibre Making Process drum is 12-feet in diameter and 45-feet long, is revolved by eight chains going completely around it, driven by a 300-hp motor. Teeth are smooth M bars which run lengthwise of the cylinder, more satisfactory than angle irons because they keep logs from brooming. The trip through requires 35 to 40 minutes for four foot logs. The drum produces enough material for about 150 units of chips per eight hours.

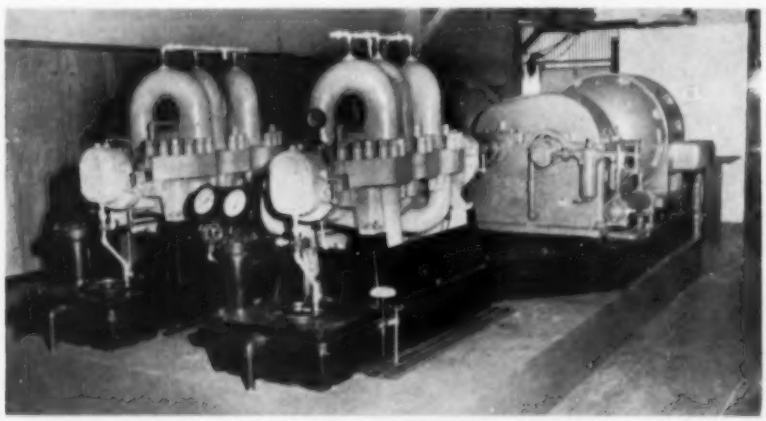
Logs discharged at the lower end of the drum are brought up an inclined chain, drop into the chipper. At top of the chain an attendant shoves off logs requiring more barking. Bark is conveyed to the common fuel hog at the mouth of the old burner. The 100-inch Sumner chipper is powered by a 300-hp motor. A seven-man crew operates the new plant.

Grays Harbor Veneer Corp. Installs Chipping Plant

GRAYS HARBOR VENEER Corp., Hoquiam, which manufactures fruit and vegetable covers, has made an investment in a new chipping plant designed to handle veneer residues.

Most of the peeled stock is hemlock, about 75%, and silver fir, which runs almost 25%, all excellent material for producing chips meeting Rayonier's specifications. Entire production of about 30 units daily goes to Rayonier. In addition, two to three

NEW CHIPPING plant at Grays Harbor Veneer Corp. produces about 30 units chips per day.



AT ANDERSON-MIDDLETON Lumber Co., twin Byron-Jackson pumps for hydraulic barker deliver 750 gallons of water per minute at 1500 psi. Each pump has an 800-hp General Electric motor.

carloads of cores per week are shipped over for chipping. Loads run 23 cords per car, a total of about 60 cords per week.

Veneer residues are conveyed to the new building by endless belt, go directly to the Jackson veneer chipper, powered by a 75-hp G. E. motor. Chips pass to top of the tipple by bucket elevator, where gravity handling takes over.

Chips are put over a Rotex No. 82 double screen with three outlets. Overs come out on top, are chuted down for rechipping. The ¼-inch chips come out between the screens, go directly to the storage bunker. Fines come out the bottom, are conveyed to a fuel bin in the power plant.

The company uses considerable steam for power and kilns and to insure an adequate and constant supply recently installed a 300-hp oil-fired Orr - Sembower Powermaster boiler. This has released an additional large quantity of veneer residues for chips. One solid fuel boiler in the power house utilizes the fine material.

LOG 40 FT. LONG moves out of barker to log deck at Anderson-Middleton Lumber Co. Scaler is Anton Zoratich. Push-button control panel at right controls whole conveyor system and barker.

Anderson-Middleton Lumber Co. Employs Barker

FOURTH MEMBER PARTICIPATING in the intensifed program of wood salvage and utilization is Anderson - Middleton Lumber Co. of Aberdeen, Wash. According to manager R. W. Middleton, in a year this plant delivers the equivalent of 15-17 million feet of logs in chips. Daily production runs 125 to 130 units.

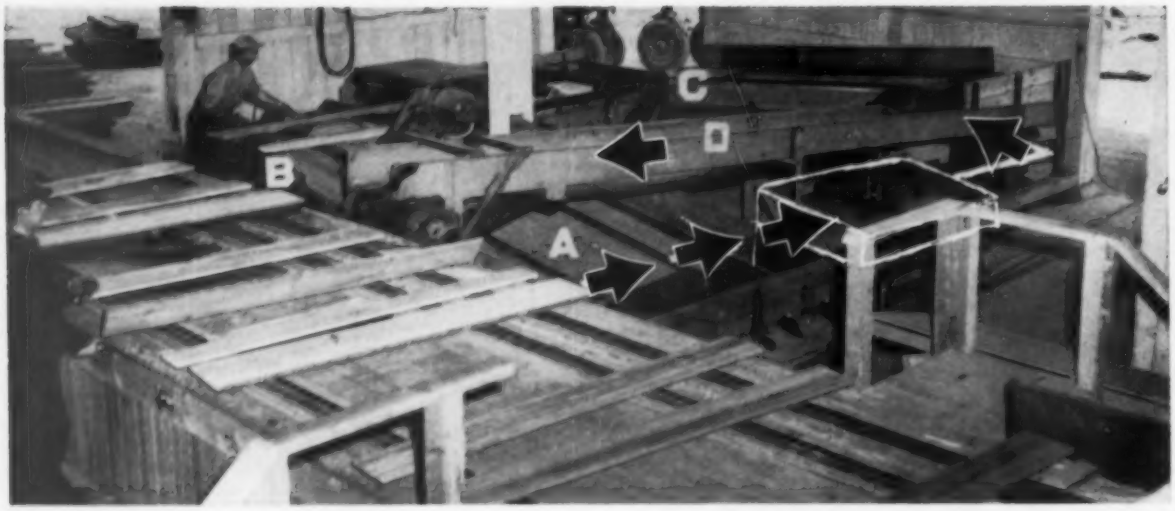
Newest installation aimed at high-grade chip production is a Hansel hydraulic barker. Speed with which the logs go through and the vertical action of the three nozzles is controlled by a governor located in a room over the barker. The governor in turn is connected to a large hold-down roll which rides the logs. The larger the log, the higher the roll is lifted and the slower the speed. Simultaneously the nozzles are moved in a greater arc. Control mechanism is a Western Gear Works S57A.

Twin Byron-Jackson pumps deliver 750 gallons of water per minute to the

(*Continued on page* 97)

Anderson-Middleton Layout

GOVERNOR, top left, controls speed of logs through barker and nozzle movement. Rocker arm under plastic cover connects with hold-down roll over logs. Control is Western Gear Works S57A. Top right: Industrial Components, Inc. push-button panel over central hopper to chipper controls material movement throughout dept. Left photo: Hansel hydraulic barker. Hold - down roll connected with governor.



MERRY-GO-ROUND off sorting chain leads to edger, in order A, B, C, D. Since picture was taken, an additional merry-go-round to a smaller planer has been added, according to outline at right. The surfaced boards are returned to the sorting chain on belt D.

Montana Grain Door Plant Utilizes Low Grade Lumber

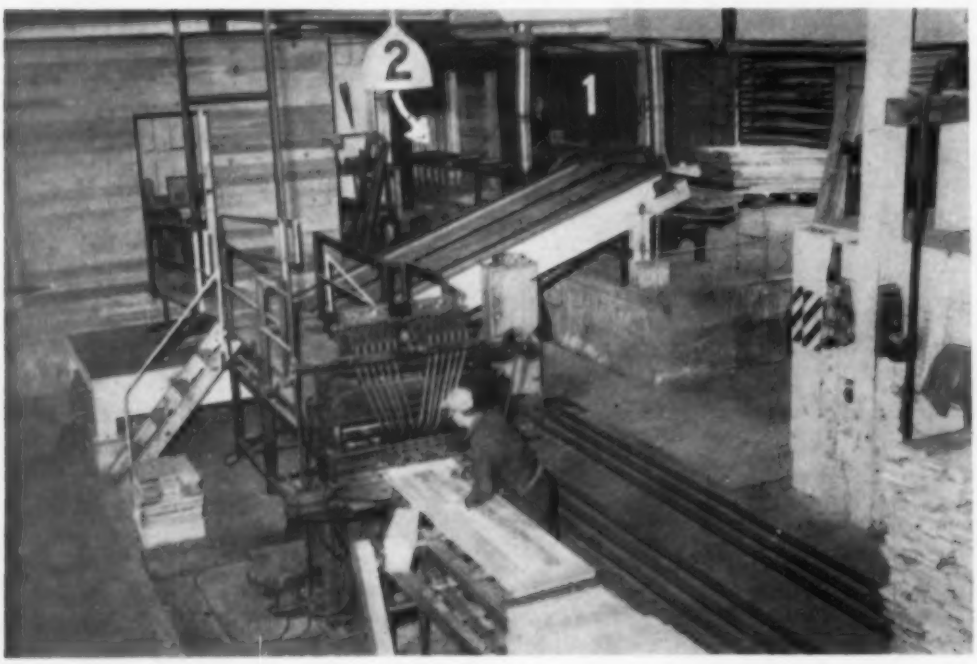
At Libby, Montana, J. Neils Lumber Co. operates new plant with many mechanical innovations.

WAY BACK IN THE CORNER is where you are apt to look for a grain door department at a western pine sawmill. Not so at J. Neils Lumber Co.

They've erected a new grain door plant on their Libby, Mont., mill site that is an entirely new concept in design and layout. In fact, it rivals many a sawmill for mechanical efficiency. Four doors per minute is the plant's production rate, attained with a minimum of handwork. Twelve workers run the plant.

Grain doors are an important specialty product of the lumber industry. Millions of board feet of lumber that might not otherwise pay its way to market are utilized in grain door manufacture. Generally, however, grain doors are produced by contract crews who are paid so much per door. In such cases, nailing is by hand, and lumber of various sizes is brought by lift truck or carrier to this department, according to the current order.

The Neils grain door plant differs markedly from this pattern. So far as is known, it is the first such plant to be built from the ground up, with a continuous in-flow of lumber at one end and a steady out-flow of grain doors at the other. It is a well-engineered plant, with specialty machines



FAST PRODUCTION and direct loading eliminates extra handling and storage. Worker in foreground feeds laid-up door into Morgan Machine Co. automatic nailer. Nailed door is conveyed up to right, where edges are jointed and the door is printed. Arrow (1) points to jointer-printer. Arrow (2) points to portable rolls leading into rail car. Peoria chain is shown in photo.

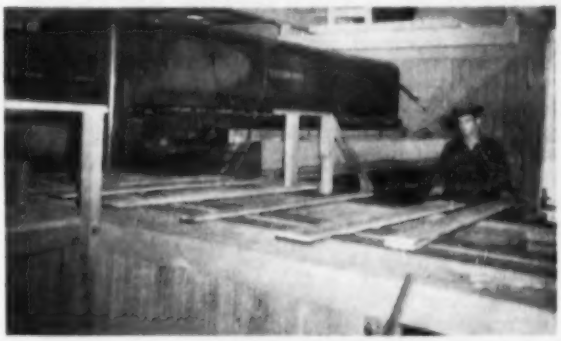
NO LOST SPACE or time here at J. Neils plant. Instead of stationary storage boards are stacked on reversible live floor chains, built in two sections. Boards are selected from stacks and placed on lay-up rolls (see No. 2 in diagram). Boards entering slasher (1) are cut into short lengths; usable pieces become cleats. Peoria chain shown here.

to match the special requirements of grain door stock. At top speed it turns out 2000 doors per shift. Key to the entire operation is the trimmer (described in this article.)

A GRAIN DOOR IS A PANEL composed of two layers of one-inch boards nailed together. One layer is shorter than the other, to allow for a cross-banding cleat at both ends. Doors are stacked one on top of another in the door of the rail car, to form a sort of removable gate. The doors are made in 83-inch lengths, corresponding to the width of the car opening. They run 18 and 20 inches in width.

At Neils, the grain door plant is a major outlet for No. 5 grade of green, kiln dried and partially air-dried lumber. Carrier loads of rough boards are spotted ahead of a Stetson-Ross tilting breakdown hoist and fed into a Stetson-Ross trimmer. The rest of

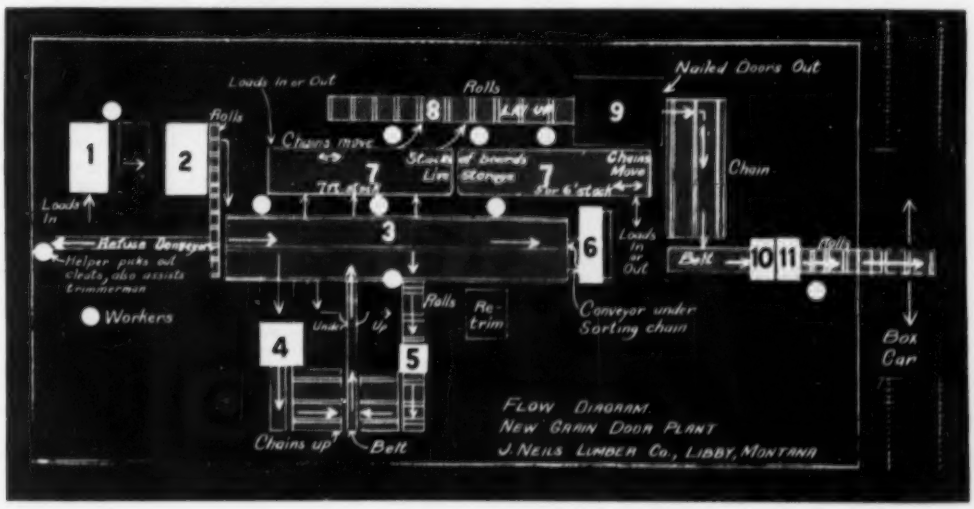
(*Continued on page* 72)



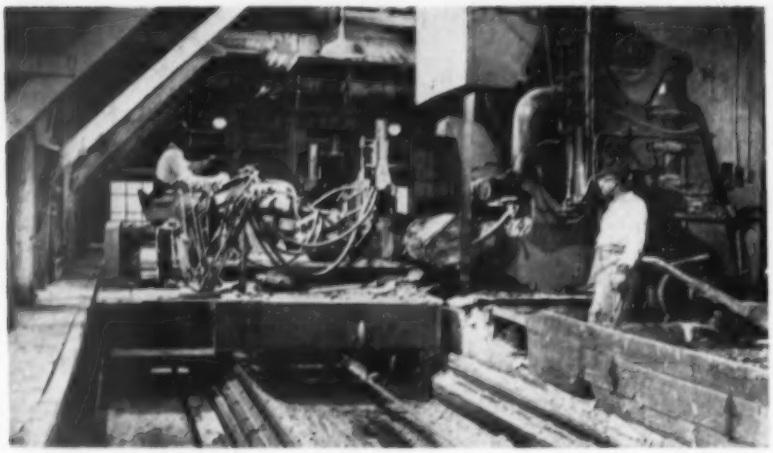
FIRST STEP in processing grain door boards is Stetson-Ross selective trimmer with electric controls. Trim saws are spaced for maximum utilization. Note single pipe connection for dust collection, feature of Model T33A trimmer. Each saw is powered off a line-shaft drive powered by 75 hp electric motor (far left). Man (r.) selects boards for re-surface.

Explanation of Flow Diagram (Numbers correspond to diagram)

No. 1, **Stetson-Ross** tilting breakdown accepts loads of rough lumber and delivers it onto feed table; No. 2, **Stetson-Ross Model T33A** electric selective trimmer (for saw spacing, see table in article); No. 3, sorting chain; No. 4, planer with top cylinder only, used for running down thick stock. (Nails will not clinch properly if boards too thick.) Planer and edger (5) are arranged as merry-go-round off sorting chain; No. 5, edger. No. 6, slasher. Saws are spaced to cut out usable 19-inch pieces to be used as cleats. Pallet-loads of cleats are picked by helper from refuse conveyor, which runs full length under sorter and picks up refuse from slasher; No. 7, six reversible live floor chains, in two sections, carry and store stocks of grain door stock. (See article for complete details.) No. 8, boards are taken from stacks by workers and placed on travelling bed of lay-up section; No. 9, automatic nailer (**Morgan Machine Co.**); No. 10, plant-built jointer smoothes edges of doors. Cutterheads are mounted vertically, one on each side; No. 11, printer stamps door, ready for shipping.



Floor plan of new grain door plant.



ELECTRICALLY DRIVEN Filer & Stowell log carriage and head saw at Crossett's No. 2 mill. Carriage and log (11 tons) can be driven past saw, returned at rate of 14½ round trips per min.

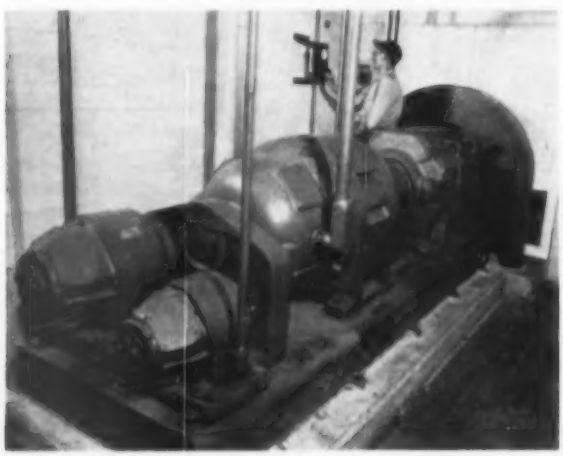
Electric Carriage Drives Save Mill Power Costs

Crossett Company reports on three amplidyne units in two sawmills

By
F. B. HUDGENS and R. N. SLINGER
Crossett Lumber Co. General Electric Co.

CONSIDERABLE INFORMATION has been published concerning design features and technical aspects of electric log carriage drives for sawmills, but few operating results have been available. This operating report gives results obtained from three electric log carriage drives at the Crossett Lumber Co., a Division of the Crossett Company of Crossett, Ark.

Each drive employs a d-c shunt motor to operate the carriage, and a motor-generator set to convert a-c line power to d-c. The drive is so designed that during the braking period just prior to each reversal, the d-c shunt motor acts as a generator which converts the stored energy in the carriage into useful electrical energy that is pumped back into the power system. This pump-back feature or regeneration, provides fast reversals of the carriage without need for brakes or clutches and results in a minimum of net power consumption.



GENERAL ELECTRIC MDP-616 General Electric log carriage drive MG set installed in control room of Crossett Lumber Co. A 200-hp wound rotor motor powers the set and the 12,600 lb. FT2 Flywheel absorbs the load peaks.

These drives are believed to be among the fastest ones of this type in operation anywhere at the present time. Their performance compared with that of the steam "shot gun" feeds they replaced therefore may be especially significant.

After over three years of operation the drives have demonstrated that substantial operating economies may be obtained with essentially the same mill output maintained as that provided by the former "shot gun" feeds.

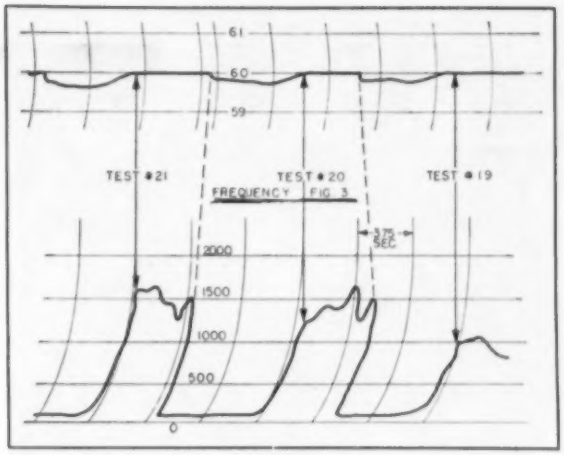
THE CROSSETT LUMBER CO. in Southern Arkansas cuts approximately 2600 pine and mixed hardwood logs per day. Logs average about 14 foot in length and 14 inches in diameter and normally run about 70% pine and 30% hardwood.

The plant has three log carriages in daily operation located in two adjacent mills. Two of the carriages are installed in Mill No. 1 and the third is in Mill No. 2. Carriages in Mill No. 1 operate in connection with a nine foot single cut band saw and a vertical resaw while No. 2 mill carriage operates in connection with an eight-foot single cut band saw, a gang saw and horizontal resaw.

All three carriages were originally equipped with 14-inch shot gun feeds but have been converted to amplidyne controlled electric drives. After a short initial break-in period, during which sawyers became accustomed to the slightly different "feel" of the controls for the new drive, the mill output of 218,000 bd. ft./day has been maintained. One of the basic requirements laid down for the new drives was ability to maintain this level. Sawmill records reveals that as many as 15 lines per minute have been obtained since the electric drives were installed.

Aside from mill output and technical performance, the aspect of these drives of greatest interest to management was the saving in operating cost resulting from their use. Steam for the old "shot gun" feeds has been produced in the lumber company's power house by boilers burning largely saw mill residues. A small amount of this steam is required to produce electrical energy to power the new log carriage drives but all of the balance represents actual saving in operating cost. Experience has shown that the power requirements of the new drives are equivalent to only 6½ percent of the steam used by the old steam "guns". The resultant savings calculated on the basis of additional KWH's of electrical energy that might be produced from the steam saved, and sold at the present rate of purchased power are shown in Table I.

TOTAL ANNUAL SAVINGS of $18,500 might be expected but experience showed that this figure was on the conservative side. On the basis of present costs of steam and electricity, actual savings proved to be some 20 per cent greater than the initial estimate. There also has been a notice-



FIGURES 3 and 4 (above) show load KW on power company tie.

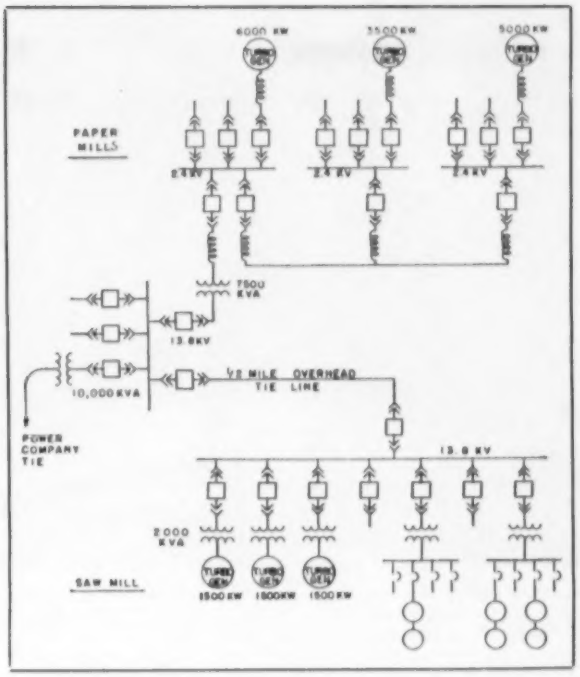


FIGURE 2 (right diagram). 300 KW M-G sets with flywheels supply DC electric power to the log carriage drive motors.

able but as yet uncalculated decrease in maintenance expense since the electric drives were installed. Principal fuel for the sawmill steam plant has been sawmill residues supplemented by a small amount of gas. Amount of left overs available for fuel was substantially reduced soon after the installation of the electric log carriage drives, by the addition of a debarker and other equipment. Had it not been for substantial reduction in the steam requirements of the mill resulting from these new drives, it would have been necessary then to burn considerably more gas as fuel. Thus the electric log carriage drives properly can be credited with even greater savings than those shown in Table I because of the higher cost of the gas fuel that would have had to be burned.

The electrical system of the sawmill is intimately associated with the electrical system of the nearby kraft paper mill, owned and operated by this same company. A 13.8 kv tie line about one-half mile in length connects the two. Thus, these log carriage drives, which represent a relatively rough type of load from the standpoint of rapid load swings, were added to a system which also supplies a relatively sensitive load as sectional paper machine drives. Electrical system for both mills is shown schematically in Figure 2.

THE DIAGRAM SHOWS that the electrical tie between the two systems is so strong that any major disturbance originating in the sawmill system will be reflected into the paper mill's system with little reduction in intensity—especially when operating with the Power Co. tie open.

The paper mill's operating group were apprehensive over the three-log carriage drives occasionally getting into synchornism and producing power peaks with resulting frequency disturbances of sufficient magnitude to cause breaks in the sheet going through the paper machines. Information based upon previous studies of the problem indicated that a frequency change of at least 0.5 cps/second would be necessary to seriously disturb a sectional drive paper machine. As a precautionary measure the motor generator sets for the log carriage drives were provided with flywheels.

To check on flywheel requirements tests were made to detrmine the effect of power surges of various magnitudes upon the system frequency and the paper mill operation. Power surges for testing purposes were produced by two different methods. In the first series of tests the sawmill tie breaker was opened while transmitting various amounts of power to the paper mills with the Power Co. tie open. In the second series of tests the Power Co. tie was opened and then reclosed with various amounts of power supplied to the papermill system from the Power Co. Throughout these tests, the tie with the saw mill remained closed.

STARTING WITH ONLY a small amount of power flow into the paper mill system the severity of the tests was increased until a maximum of 2000 KW was dropped, which produced a change in system frequency at a rate of approximately 0.2 cps/second. Even a power surge of this magnitude which represented over 10 percent of the connected generation of the combined paper mill and sawmill systems, did not interfere with the paper making operations. Most noticeable change observed was a five-inch drop in the head produced by one of the paper machine fan pumps. In terms of total overall head, this was of minor importance.

The change in system frequency resulting from a power surge of 1600 kw produced by opening the power company tie while carrying that load, is illustrated by the high speed recording instrument chart shown in Figures 3 and 4. Figure 3 represents the change in system frequency resulting from the sudden change in tie line loading, illustrated in Figure 4.

Another factor affecting the design of the M-G set is the slip of the driving motor under maximum load conditions. A slip greater than seven or eight per cent will noticeably affect carriage performance.

(*Continued on page* 80)

Table I
Annual Steam Consumption of Sawmill

With shotgun feeds on 3 log carriages	132,000,000 lbs/yr.
With 3 electric log carriage drives in operation	52,000,000 lbs/yr.
Reduction in total steam consumption	80,000,000 lbs/yr.
Net saving in steam consumption after deducting steam necessary to generate electric power for electric drives	74,700,000 lbs/yr.
Additional electrical energy available from steam saved = 74,700,000 ÷ 18 lbs/KWH =	4,150,000 KWH
Cost of purchased power =	8 mills/KWH
Generation cost with wood fuel =	2.5 mills/KWH
Annual savings = (4,150,000) (0.008-0.0025) =	$22,800.

CLASS IN SURFACED lumber grading studies board imperfections to determine grade classifications. Mill employees study manufacturing processes.

Job Training Program Improves Work Performance

Boise Payette Lumber Co. screens applicants and trains them to be better employees.

MERE PHYSICAL STAMINA no longer is the criteria upon which an employee may be recruited or trained in the forest products industry. Companies concerned with obtaining better job performance, improved morale and self-betterment of employees now are placing greater stress on recruiting and training programs, because they reduce costly job turnovers.

Boise-Payette Lumber Co., Boise, Idaho, is one of several companies whose personnel and training department has embarked on a successful employee indoctrination and training program. According to Tony Galdos, training director, the vocational school is paying off handsomely.

Surrounding mills are also permitted to send employees to the school, thus distributing its benefits industry-wide on a community level.

The double-barrelled program initiated by Boise-Payette recruits employees through a testing procedure and careful interviews, followed up by a well-organized training program.

The company knows that only through careful examination, prior to employment, may a later training program receive maximum results in guiding, developing and placing of employees. Efforts directed at only one phase, of either recruitment or training, at best result in a retarded program.

PLANER SET UP school shows employees techniques involved in some of the phases of lumber manufacturing.

THE INITIAL PHASE, recruitment, is carried out by Boise Payette Lumber Co. through a local Employment Security Agency. All applicants seeking hourly jobs at the sawmill place their applications at the Agency on company forms. The Agency interviews and otherwise performs all pertinent factors related to determining the qualifications of the applicant.

A successful interview means the applicant is assigned a date to take the Agency's General Aptitude Testing Battery. The test consists of three and one half hours of combined written and manual peg board examinations. The test determines the individual's aptitudes in general intelligence, verbal, numerical, spacial, form preception, clerical, motor coordination, fingery dexterity, and manual dexterity.

Following the test the scores are computed by the agency and placed on the card with the applicant's name. Upon satisfactory results in the test and the employment of the applicant, these same cards are placed in a file in Boise-Payette Lumber Co.'s personnel and training department. Training may then be initiated and continued by reference to these cards which readily indicate the employee's score in each specified aptitude.

FORMAL TRAINING, as such, is initiated by the training department in conjunction with the Vocational Educational Department of the State of Idaho in the latter part of February of each year. Prior to the starting of

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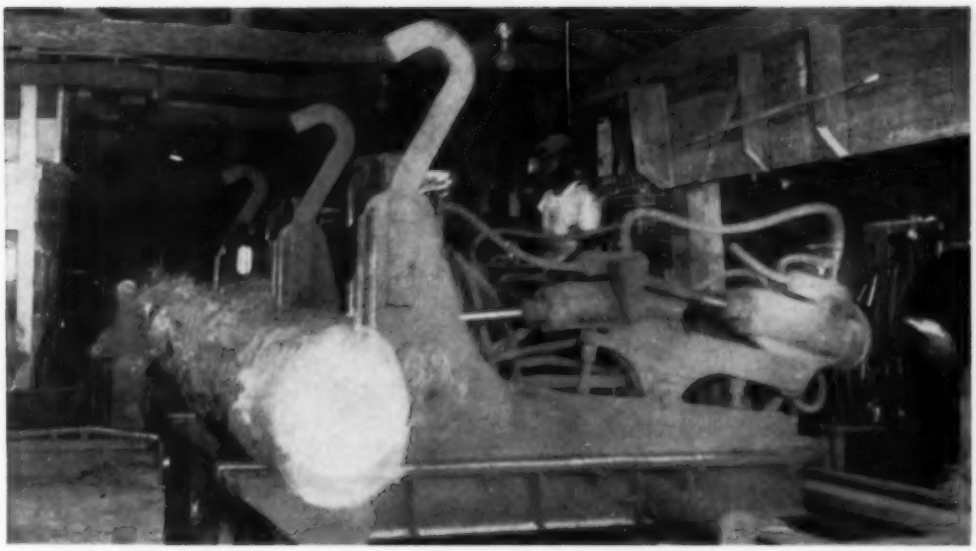


NEW CORINTH steel frame carriage with air Trout set works.

New Carriage Boosts Output

Grindle Lumber Co. in Alabama gets more and better lumber from installation.

MORE AND BETTER LUMBER with one man less in the crew, through installation of better equipment, was Grindle Lumber Company's answer when it sought relief from ascending costs. The mill, of which Roland Grindle is principal, is at Selma, Ala.

Prior to its improvement the mill had produced an average 18M feet daily, divided about equally between hardwood and pine. When the yard is well stocked with logs, the mill runs first on one species then the other. When the log supply dwindles, no special days for either species are followed.

Logs are purchased delivered to the yard, are picked up with a Hyster fork lift that carries them up an earthen ramp to the upstairs mill log deck. Simonds saws are filed for combination use (pine and hardwood). Log deck is "live".

Early in 1956, Grindle installed a new Corinth steel frame carriage with air Trout set-works and non-defacing dogs. Results: elimination of the dog-setter; a production increase from 18M to 21M feet daily; more exactness in lumber manufacture.

Back of the 60-inch Simonds circular saw a transfer serves a McDonough vertical re-saw with conventional merry-go-round.

Lumber from both headrig and re-saw is fed to a green chain crossing the mill rear from left to right. At left, a stub end receives purchased green lumber from trucks, with purchased and company manufactured items moving out to the sorting conveyor. Mill installation and lay-out is conventional.

Both pine and hardwood are air-dried. Two men serve the trimmer; two the green chain; the millwright sharpens the saws. Total mill crew is 10 men. The Hyster operator is charged to the yard. In addition to the Hyster, the mill has a Foshee lumber carrier. Hardwood lumber may be sold rough air dried to brokers, or if it is oak, may be dressed on order. Pine boards and dimension goes through the planing mill.

Mill operation is on a five-day week eight-hour day.

The Grindle mill believes that stumpage prices will not go down; that higher levels now prevailing will continue because the demand is too varied and the paper industry too large for the market to weaken. During the depression timber owners would not sell stumpage but forced land acquisition because tax money could not be found for cut-over acres. Any marked decline in present day stumpage it is believed will occur only with a downward trend in the general price structure. General price level in the area has a $30 per acre minimum to start with.

SHOWN ABOVE is McDonough vertical band resaw. The headrig roller bed is located to right.

Union Expects Wage Boost

• Despite the industry's various economic troubles due to shrunken markets, lower prices and higher costs, the International Woodworkers of America, representing 32,000 unionized workers in British Columbia's forest operations, has asked for a 20% wage increase. Prolonged negotiations are expected to precede final agreement on the new contract which would take effect in June. The union is reported to have a $1,000,000 strike fund consisting of government bonds, all of which would mature prior to expiration of the present contract. The union claims that the present "soft market for lumber is only temporary". Operators, represented by John Billings, of Forest Industrial Relations, which bargains for the industry, says it's hard to take the union's demand seriously in view of prevailing conditions.

AERIAL VIEW of Coos Head Timber Co., Coos Bay, Ore. shows principal parts of manufacturing operations. (See flow chart, opposite page). No. 1 is pond saw; No. 2, barker building for ply plant; No. 3, sawmill building, scrag mill at left, band mill at right; No. 4, green end of ply plant; No. 5, dry end; No. 6, sorting chain for sawmill; No. 7, planing mill. (Photo: Western Ways, Inc.)

Plywood Plant and Two Sawmills Combine Facilities

Coos Head Timber Co. in Oregon operates scrag mill, band mill and plywood plant.

Green Sorting

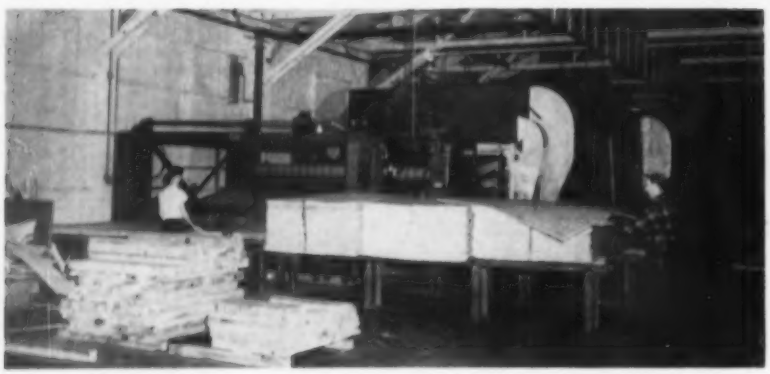
(top left)
TWO COE M346 clippers discharge to sorting belts. Tray system has Air-Flex clutches.

Veneer Dryer

(bottom left)
COE OIL FIRED M54 dryer is 10 section, 5 line and has Coe automatic veneer feed.

Pond Saw

(bottom photo)
LOGS AND BLOCKS are bucked to length with Union Iron Works saw equipped with 9' bar.



VENEER CORE SAW is manufactured by L-M.

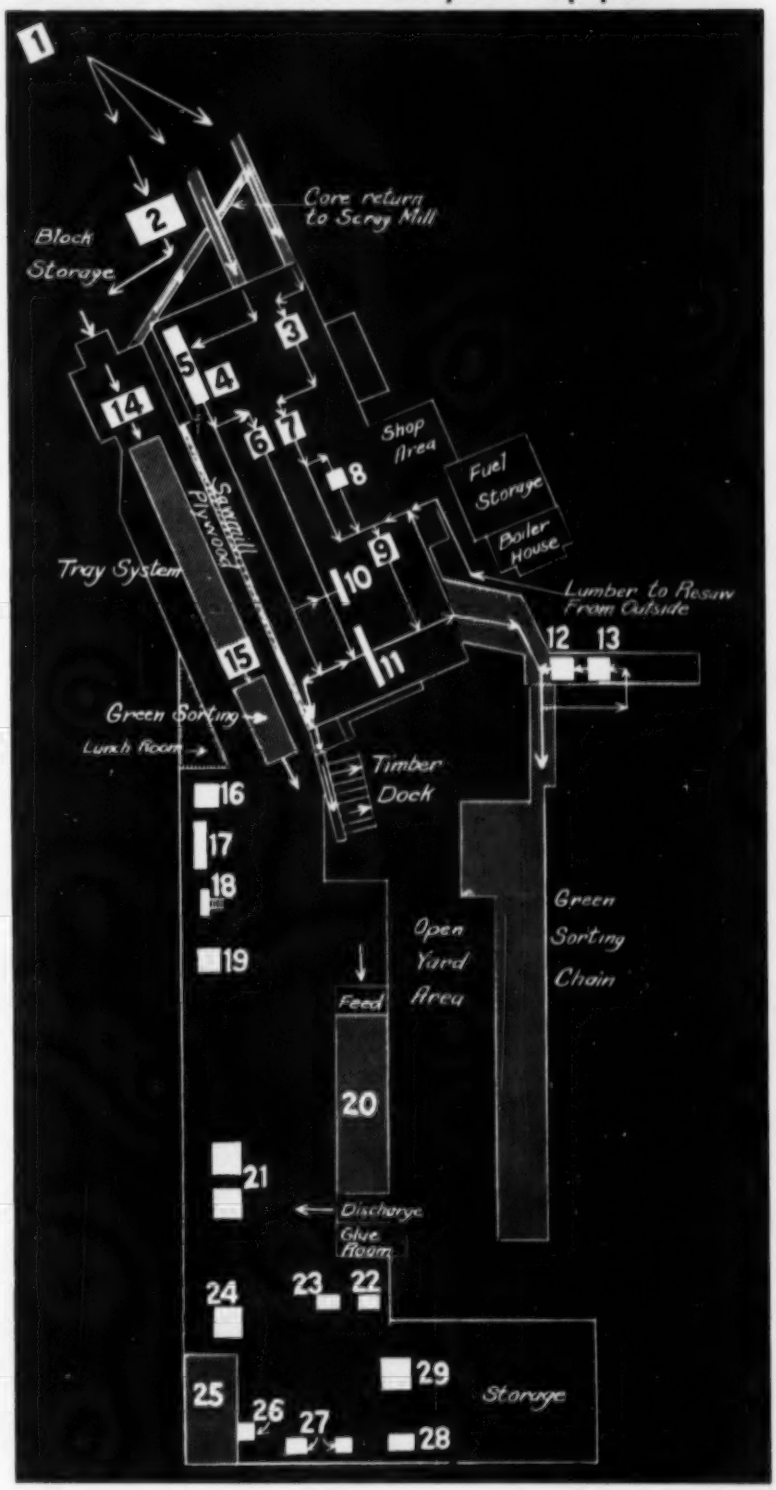
INCREASED UTILIZATION of raw material has been effected by Coos Head Timber Co., Coos Bay, Ore. through the operation of its two new side-by-side plants, a plywood unit and a scrag mill. Both started up last year. Accompanying flow charts show the principal equipment and material flow in these plants.

The scrag mill, a Keystone two-saw machine, turns out about 35M board feet per shift, and is teamed up with a single cut bandmill, which produces approximately 150M board feet per shift. Both mills share the same floor facilities and their separately edged output merges at the Allis-Chalmers seven foot horizontal resaw, which feeds direct to the trimmer offbearing transfer.

The sawmill has two log hauls, one for the big rig and one for the scrag mill. Each rig has its separate deck feed. Raw material for the scrag mill is small logs of a salvage type and

(*Continued on next page*)

Flow Chart Shows Sawmill and Plywood Equipment



Principal Equipment

GENERAL

NO. 1, **UNION IRON WORKS** pond saw, electric driven with 9 ft. bar.

SAWMILL

NO. 3, **Keystone** two-saw scrag mill, driven by 150 hp motor; NO. 4, nine foot **Allis-Chalmers** single cut band mill, driven by 250 hp motor; NO.5, **Prescott** four block all electric carriage, driven by **Filer and Stowell** shotgun feed; NO. 6, **Lamb** 12x60 inch edger, driven by 250 hp. motor; NO. 7, **Keystone** 6x54 inch edger.

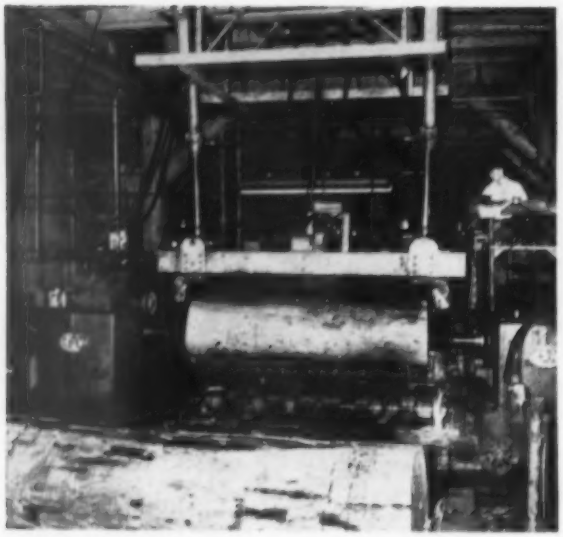
NO. 8, 2x4 stud edger; NO. 9, **Allis-Chalmers** 7 ft. horizontal resaw; NO. 10, twelve saw slasher; NO. 11, 40 ft. trimmer; NO. 12, **Irvington** hula trimmer; NO. 13, **I. W. Johnson** pony edger.

PLYWOOD PLANT

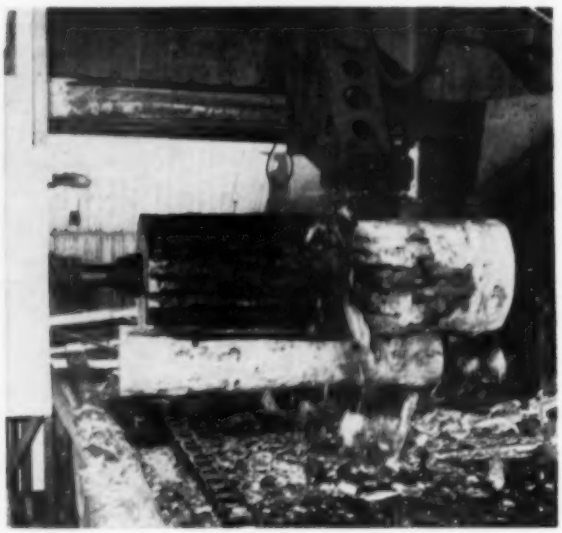
NO. 2, barker designed by **Al Lane**; NO. 14, **Coe** M244, 113 inch lathe, with **Edorer** lathe charger, driven by **Republic** DC electric drive; NO. 15, two **Coe** M346 clippers, receiving stock from 6 trays, 115 ft. long, with **Air-Flex** clutch drive, **U. S. Rubber belts.**

NO. 16, **Globe** shim cutters; NO. 17, **Merritt-Solem** dry clipper; NO. 18, **Merritt-Solem** jointer; NO. 19, **Globe** taper; NO. 20, **Coe** 10-section 5 line M54 oil-fired veneer dryer, with **Coe** automatic feed; NO. 21, two **Raimann** patchers.

NO. 22, **Globe** glue spreader, fed by **Fluckinger** glue mixer; NO. 23, **Edorer** cold press; NO. 24, **L-M** core veneer chain saw; NO. 25, **Globe** panel and equalizer saws, NO. 26, **Peninsula** veneer hog; NO. 27, patching dept.; NO. 28, **Globe** belt sander; NO. 29, **Yates-American** 8-drum sander. **American** scissors lifts are used in plant; also 6 **Hyster** YT40 lift trucks, one **Clark** lift truck. **Pacific Saw and Knife** carbide saws.



COE M244 lathe is 113-inch, equipped with Republic DC drive.



BARKER is scraper type, which was designed by Al Lane.

EDERER COLD press, at left is served direct by Globe glue spreader. Interior type panels are produced in this plant.

veneer cores from the adjoining plywood plant. A return conveyor leads directly from the lathe to the scrag mill log haul.

A common pond saw serves the two sawmills and the plywood plant. The electrically driven Union Iron Works nine foot unit cuts off block and log lengths, as needed.

THE PLYWOOD PLANT BARKER is separately housed in the pond area

(*Continued on next page*)

SCRAG MILL is two-saw Keystone, driven by a 150 hp motor and feeds to a Keystone edger.

PONY EDGER is an I. W. Johnson machine.

HORIZONTAL RESAW is 7′ Allis-Chalmers, which receives stock from edger and trimmer table.

IRVINGTON HULA trimmer handles stock.

Lumber Stacker Saves Space

A SEMI-AUTOMATIC STACKER and unstacker being developed by a British Columbia engineering firm offers another potential in sawmill automation. The one-man operated unit stacks large quantities of lumber from a continuous feed, at low operating cost and with relatively small capital expenditure. It was designed by W. R. Carroll, R. C. Clough Engineering Ltd., Vancouver, B. C.

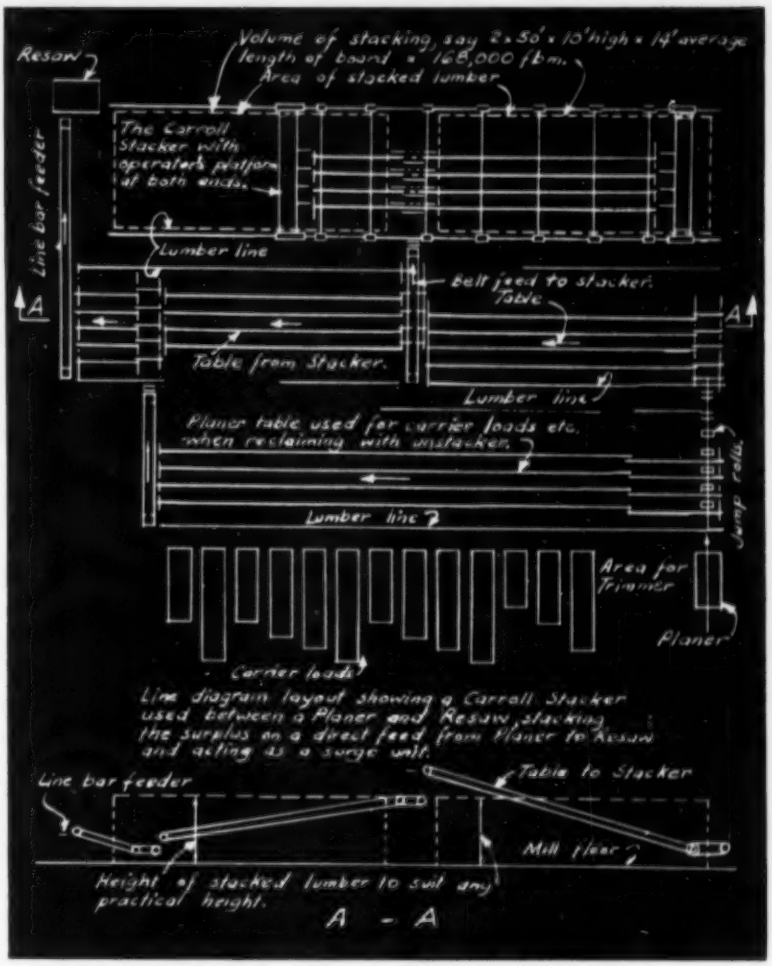
The unit is completely reversible in its operation and can stack lumber into piles of any length, width and practical height. For example, a pile could be 100 ft. long, 15 ft. high and 20 ft. wide, the width being the length of the boards. It could then unstack the pile of lumber in a fast continuous operation, for delivery to planers, etc.

The stacker because of its overhead feed and discharge needs no carriers or fork lift trucks. Therefore no access roads, to or around stacks of lumber, are required, making it a big space saver in the yard.

The stacker was primarily designed to be operated by one man and to handle large quantities of lumber (up to 100,000 F. B. M. per shift) in a continuous or heaped up flow, as from the end of a mill and to stack into a very large stack or pile, reclaiming for manufacturing (planing, resawing, etc.,) when required. Sticking can be as required, making it suitable for kiln stacking.

The stacker offers potentials when resawing after planing. The lumber can be fed directly from the planer to the resaw and trimmed if required. The surplus that cannot be handled by the resaw, is by-passed and stacked in large quantities near the resaw and reclaimed by the Carroll Stacker.

It is then fed to the resaw on the second shift, or when required, while the planer is on another cut. This operation would work on any manufacturing where the slower machine is behind the faster machine. The saving here is the pulling of lumber from a chain and stacking into carrier loads, or end stacking, plus all the moving of carrier loads and rehandling of the small loads before it can be delivered to a resaw, etc.


Resaw
Volume of stacking, say 2 x 50' x 10' high x 14' average length of board = 168,000 fbm.
Area of stacked lumber
The Carroll Stacker with operator's platform at both ends.
Line bar feeder
Lumber line
Belt feed to stacker Table
A
A
Table from Stacker.
Lumber line
Planer table used for carrier loads etc. when reclaiming with unstacker.
Lumber line
Jump rolls
Area for Trimmer
Planer
Carrier loads
Line diagram layout showing a Carroll Stacker used between a Planer and Resaw, stacking the surplus on a direct feed from Planer to Resaw and acting as a surge unit.
Line bar feeder
Table to Stacker
Mill floor
Height of stacked lumber to suit any practical height.
A - A

This stacker is a combination of four pieces of mill equipment, which have been combined into one operating unit, for which patents have been applied by W. R. Carroll. No units are in mill operation as yet.

(*Continued from page* 46)

(see flow chart). Blocks go up an incline haul, through the barker and are dumped back into the water for storage or routing to the plywood plant.

The barker was designed by Al Lane of Drain, Ore. It has an overhead scraper head, 14 inches wide, built of 1¼ inch steel, whose travel across the block is synchronized with the revolution of the block. Block diameters up to 84 inches are accommodated. The barker is charged with an air operated lift. All other operations are air controlled.

The plywood plant produces approximately 48 million square feet of ⅜ inch, three ply interior type panels yearly. Sales agents are Coos Head Lumber and Plywood Co., Wilmington, Calif.

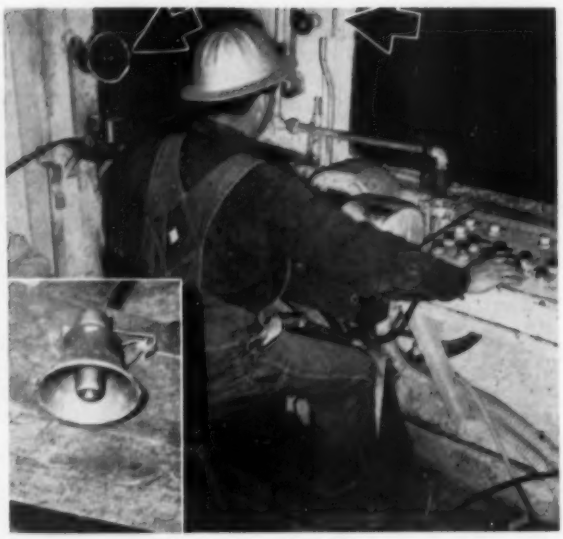
The spacious plywood plant, which is 250 feet wide at the 90 foot wide storage end of the dry section, and approximately 125 feet wide the rest of its length, contains the equipment shown in the flow chart. The plant features a L-M veneer core saw, Globe sizer and skinner and an Ederer cold press.

President of Coos Head Timber Co. is F. Willis Smith. H. A. Page is sales manager. William Winkel is plant superintendent of the plywood plant and Lew Sperling superintendent of the sawmill. The company also operates a sawmill at Empire, Ore., with Tony Cotter as superintendent, which produces approximately 150M board feet per day.

Atlanta Site for Hoo-Hoo Convention in September

• The International Concatenated Order of Hoo-Hoo announces Sept. 16-18 as the dates of the 66th annual meeting with the theme of "National Convention in Dixie." Atlanta Hoo-Hoo Club No. 1 is acting as host to the International Lumbermen's Fraternal Order.

The Dinkler Plaza hotel will be convention headquarters. Sam E. Houston, Jr., general convention chairman, announced that the three day program will include all traditional features of Hoo-Hoo conventions, but will be carried out in the distinctive Southern manner.



LEAD MAN on boom (left photo), Richard Running, with log load ready to lift up well, gives "Ho-Ho" signal to barker operator, which is picked up by horn (arrow and inset), relayed upstairs by intercom system. Here (right photo) signal is broadcast by speaker (left arrow), alerts barker operator to push button controlling log lift. Light (right arrow) flashes when log reaches top of well.

"Squawk Boxes" Simplify This Sawmill's Operation

Weyerhaeuser Timber Co. at North Bend, Ore. harnesses electronics to save time.

ELECTRONICS SAVE STEPS and time and coordinate manufacturing processes in the two-headrig sawmill of Weyerhaeuser Timber Co. at North Bend, Ore.

Two separate intercommunication systems in the mill and a two-way radio link between lumber carriers and the shipping office on the shipping dock do the trick. Plant electrician John Sample improvised the intercom system from surplus electrical units. Motorola Communications and Electronics Inc. installed the radio system.

Log supply to the sawmill reaches the whole-log barker deck, first step in the manufacturing process, through a 40 foot vertical log well. Logs feed to the bottom entry point by tide action of the Coos River, on which the mill fronts, and are picked up for their aerial ascent in a set of drum-driven chains.

Under the old system, a push button control down at water level started the logs up when they were ready for the lift. To work this, the boom man ran or walked to the button station and manually depressed the button. This required time-consuming extra travel during the course of the day and extra "log hopping".

SIMILARLY, ANOTHER MAN at the top of the log well stopped the lift with a push button and discharged

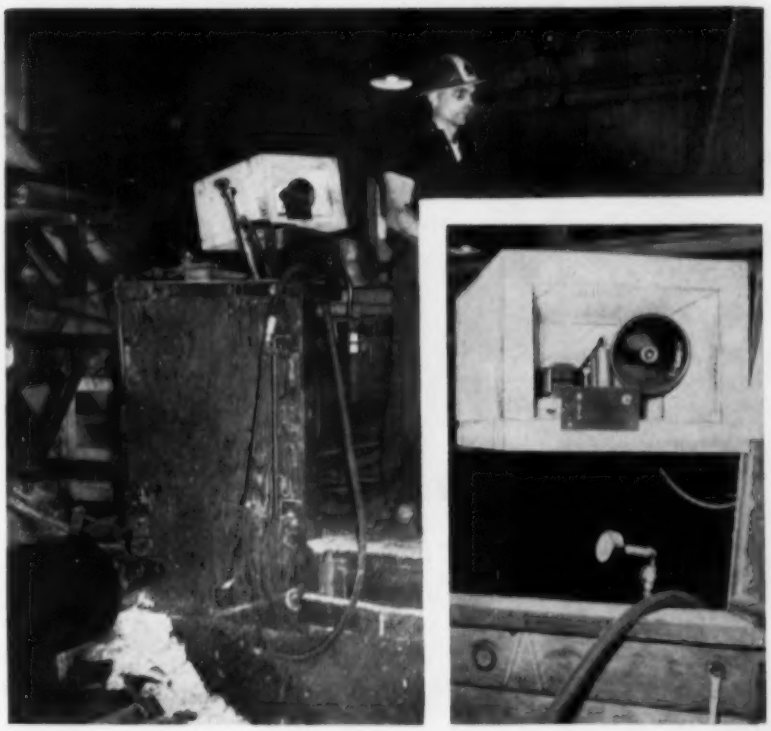
ON STRADDLE CARRIER, left photo, arrow points to Motorola side-pack power unit and aerial, which equips carrier for two-way communication with shipping office and cargo shack. Right photo, Martin Lee in shack, relays lumber pickup order with two-way radio.

Pack River Uses Radio-Phones

Pack River Tree Farm Products, Spokane, Wash. uses radiophones at its Dover planing mill. Earl Hustead, foreman, estimates 35 to 40 per cent time has been saved in movement of loads and in getting loads to the right place at the right time.

The two-way low-range phones have been installed in two offices and on four vehicles—two lift trucks and two carriers. The Dover lumber yard extends up to one quarter mile from the planing mill. The system avoids unnecessary trips back to the office, and saves miles of leg work by foremen.

Instruments in use are Industrial Mobile phones manufactured by Kaar Engineering Laboratories, Palo Alto, Calif. They were installed by Northwest Electronics Inc., Spokane, Wash.



IN SAWMILL, intercom connection is provided between bull edgerman, head sawyer on main headrig, timber cutoff saw and foreman. Shown above is bull edger station with intercom box behind operator. Inset is closeup of box, shows adjustable metal arm on which it is positioned.

the logs to the barker feed deck.

Here's how it's done now. There's a loudspeaker fastened to an overhead beam at the bottom of the log well (8 ohm, 3 watt, Mil 8, Universal). It either picks up or transmits voice, which is volume controlled by tube amplification. Upstairs in the barker operator's room is another loudspeaker on the wall, alongside the operating console. It has a switch control, for "listening" and "talking", plus a volume control.

When a load of logs is ready for the lift, the boom man gives a loud "Ho-Ho" shout, *wherever* he may be in the area. The sensitive speaker picks up the sound, transmits it upstairs to the barker operator. *He*, instead of the boom man, pushes the button to start the logs up. Since he's already seated, it requires no extra running around to do this.

When the log load reaches its top point, a limit switch contact in the well turns on a light overhead and in front of the barker operator, over his console. That's the signal that the load is ready for feeding to the deck. The light remains on until the operator presses a button which discharges the logs. The chains are then returned to the bottom of the log well for another load.

WORK EFFICIENCY has been stepped up tremendously with this time-saving installation. Boom men have streamlined their operation considerably and are less tired at the end of the day.

On the sawmill floor, a direct-wired intercom system has been installed between the head sawyer on the big headrig (recently converted to a riderless carriage feed), the bull edger operator, the timber cutoff saw operator and the foreman. The speaker-receiver units are contained in sound proofed boxes which are fastened to movable metal arms. Any questions concerning grade and dimension cutting on cants or timbers can be asked and answered by these keymen in lumber production at the touch of a switch. The system eliminates guesswork, increases quantity and quality production.

On the shipping dock, two lumber carriers and three stackers are equipped with two-way Motorola radio. Other sets are in the cargo shack and the main shipping office, providing convenient and instant communication between these stations.

Whereas before there was considerable difficulty in having lumber loads picked up promptly for ship loading, it's now possible to dispatch messages immediately, get a prompt acknowledgment from a carrier or stacker operator and have the lot—designated load on its way to ship side, in jigtime. The "hide-and-seek" aspects of loaders looking for carriers has been eliminated. All lumber packages are designated by lot number and yard location and dispatching is made foolproof.

The combination of two-way radio and packaging of lumber loads (some 80 to 85 per cent of lumber loaded out at North Bend operation of Weyerhaeuser is in packages) has enabled the dock to load out up to a million board feet in a day. Deep tanks in Weyerhaeuser Steamship Co. vessels have permanent stanchions. Use of heavier gear, better facilities and improved loading methods enable the ships to make more round trips per year.

How LPI Systems Work

Radio systems such as is used by Weyerhaeuser Timber Co. on its shipping dock are classified as Low Power Industrial (LPI.) They are available to any industrial service, forest industry or otherwise. The LPI frequency is 154.57 MG, the same as is used by Talkie-Tooter and similar devices recently approved by FCC. All radio sets in LPI are limited to 1½ watts power output.

Weyerhaeuser uses its LPI on a 152.99 MG high band frequency, but operates on the low power to prevent interference with other sets. WTC uses a low band frequency 49.38 MG on its forest industry system and also a high band, 153.35 MG.

Equipment used by Weyerhaeuser on the shipping dock is furnished by Motorola Communications and Electronics, Inc. It includes two L23-GGB AC Utility Stations at the two dispatch points (cargo shack and shipping office) and five T23-GGV mobile units on the straddle carriers and lift trucks.

• Some homes built of wood two centuries ago are sound as a dollar. Examples are the Fairbanks home at Dedham, Massachusetts, built in 1636, and Mt. Vernon on which construction was started in 1743, or possibly earlier.

SUMNER TYPE 502 Briquettor, Harbor Box & Lbr. Company, Los Angeles, Calif. Drive arrangement (R) and control cabinet (left of flywheels), overhead storage bin and vibrating feeder. BurnRite logs lead from discharge end (L) to packing table.

Briquettor Converts Residues Into Profits

Machine utilizes milling residues and also solves a smog problem.

OPERATING ONE OF THE LARGEST box factories in the West, Harbor Box & Lumber Co., Los Angeles, Calif., utilizes more than 30 tons of shavings and hammer mill chips per day. These residues are turned into revenue with the West's largest Sumner briquettor, Model 502, first of its size to be put into production in the United States.

The briquettor, made by Sumner Iron Works, Everett, Wash., molds and compresses chips and shavings into fireplace logs 12 in. long by 3¼ in. diameter, which are sold to householders throughout Southern California.

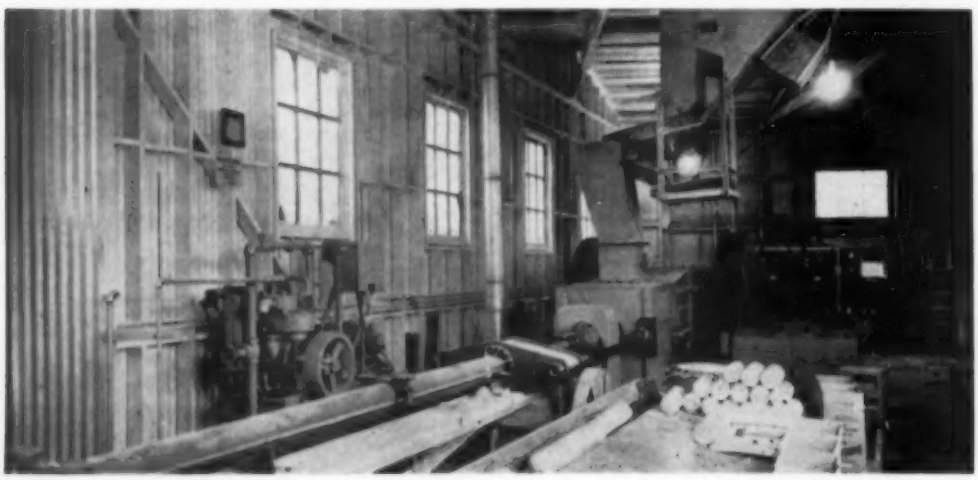
The briquettor installation also eliminates air pollution caused by burning the residues. In Los Angeles, faced with an acute smog problem, this consideration influenced the installation.

Fundamentally, the briquettor is a very strong steel mold composed of two shells which, closing together, make the cylinder in which the fireplace log is formed. At every cycle, the mold opens, is filled with log material, closes, and a piston then compresses the material under 100,000 psi pressure, into a continuous log 3¼ in. diameter. No resin or other binder is added; the log is pure wood. EACH STROKE OF THE PISTON makes a disc about ¾ in. thick. The discs, pressed together, make up the log. The continuous log travels down a pipeline for about 100 ft. to an automatic guillotine which chops off sections 12 in. long.

These are returned on a chain conveyor to a boxing station where they are hand-packed six to a carton in an attractive consumer box. Although too hard to saw, the logs can be chopped easily: they break off cleanly between discs. Thickness of the discs is controlled so that an even number of discs make up a 12-in. length.

Species used at Harbor Box are pine, fir and cottonwood. Much experimentation was done to determine exactly the right blend of these woods, and the right log density and size, to produce a log that would burn for the longest possible time cleanly, without charring or smoldering. This required hitting the proper balance between hammer mill material and shavings, and the right fineness of grind of the hammer mill chips. Considerable auxiliary equipment in addition to the briquettor itself was required.

Planer shavings come from two large matching machines in the mill, which is a separate building from the briquettor shed; one matcher processes pine, the other fir. Hammer mill material comes from the hammer mill. These materials are conveyed to the blender, an extinct burner now adapted into a huge shavings bin. Two cyclones handle the hammer mill material and shavings, both equipped with deflectors to assure a more uniform blend. Deflectors deposit the materials evenly in the blender. This



FRONT VIEW Sumner Briquettor shows the overhead material storage bin with vibrating feeder leading to Sumner Briquettor. BurnRite logs pass from discharge end of the Briquettor through the pipe line at the end of which they are cut into the desired length and returned by conveyor to packing table where they are packed in cartons shown at the right.

prevents the shavings pyramiding up and the hammer mill materials flowing down the pyramid and building a perimeter around the base.

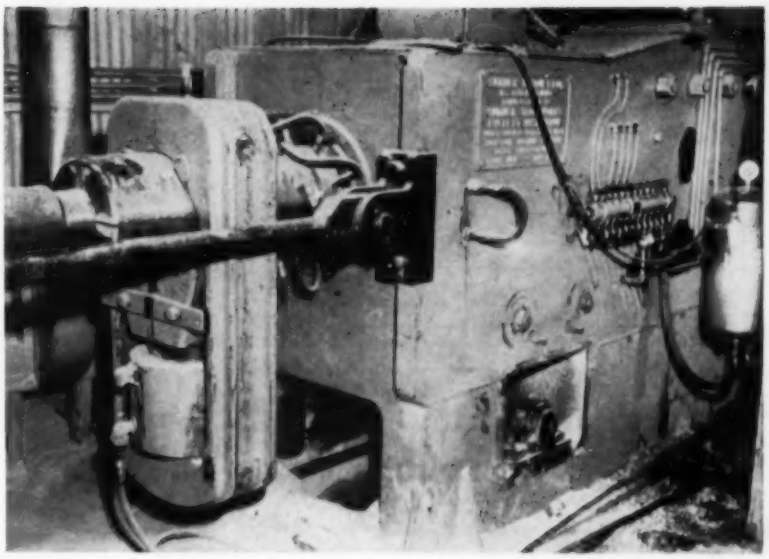
To move material from the blender to the grinder, housed in a separate neighboring shed, a drag chain circulates over the floor of the blender, sweeping the material into a central cement pit. A bucket conveyor picks it up from the pit and delivers it into a chute through which it flows by gravity to the grinder. The grinder is a Jay Bee, made by J. B. Sedberry Inc., Franklin, Tenn.

BLENDED AND GROUND MATERIAL moves pneumatically to the briquettor. A 100-hp G. E. electric motor supplies power for the grinder; a similar unit drives the briquettor itself. The heat generated by the briquetting action under 100,000 psi pressure requires a special water cooling tower to control temperature. An auxiliary fan and duct pick up spillings from the briquettor mold and blow them back into the bin.

Automatic controls regulate piston pressure, quantity of the load and thickness of the individual discs. These factors can be altered when necessary, to balance log density with wood blend and maintain uniform performance in the finished log. Tests are conducted continuously to insure consistent burning quality.

The end result, a pure wood log, burns with a clear, very hot flame. Few residues remain to be burned. Formerly, burning rate was as high as 6000 lbs. per hour in a multiple-chamber incinerator. This unit still disposes the yard refuse and similar non-usable trash. Meanwhile, Los Angeles air pollution authorities are pleased with the company's solution of its leftover problem.

AN ENTIRELY NEW SALES STAFF, organized under Lynn Wiggins, markets the logs through wholesalers supplying supermarkets, hardware stores and similar consumer outlets. Sales, according to Mr. Wiggins, are satisfactory, although the Southern California weather is always a factor. The past winter has not been specifically favorable to sales of fireplace fuel. However, the company is counting on the rapid growth of the area to create sufficient demand for the total production of the plant, making the installation economically self-supporting.



HEART OF THE MOULDING operation. Ram travels from right to left, compressing and molding material into discs, which, pressed together, form continuous log, later chopped to 12" length.

Houston Parker, plant engineer at Harbor Box & Lumber Co., is principally responsible for operation of the briquettor, which was installed under the supervision of W. C. Briggs of Sumner Iron Works. Working with Frank Kuehne, millwright, Mr. Parker controls the supply of chips and shavings from the matchers; he also exercises absolute control over the movement of shavings after they leave the matchers. Thus he keeps close check on blend of materials feeding the briquettor.

Production of the logs must continue through the summer, although sales will decline during these warm months. The company therefore will have to warehouse packaged logs during this period. Harbor Box operates throughout the year, supplying boxes to bakeries, beverage bottlers, hardware and other manufacturers, as well as to the seasonal produce trade.

Filer Completes a Half Century of Service

• Few men can boast of having worked in western mills for more than a half century. Adolph Wehrlie, who also is often called "Ed", is such a man, having actually been actively engaged in mills for 54 years. He has been with the Graeagle Lumber Co., Graeagle, Calif., for the past 29 years, 14 years as millwright and 15 years as superintendent. Mr. Wehrlie recently retired following the permanent closing of the Graeagle mill. He is now living at Rt. 2, Box 1075, Grass Valley, Calif.

Adolph Wehrlie

Mr. Wehrlie started working in a western mill in 1903 in Siskiyou County, Calif. He was with the McCloud Lumber Co., and was also with the Sanger Lumber Co. at Fresno, which flumed its lumber 60 miles. After working at a number of different mills, he was filer at a Klamath Falls operation for nine years, after which he went to Graeagle where he remained until he retired.

• Lumber manufacturing has been going on in Oregon for 120 years.

Carloading Gain Seen

• A small increase of 0.7 per cent in total Pacific Northwest carloading for the second quarter compared with last year is forecast by the Pacific NW advisory committee.

Lumber and forest products in both the fir and pine regions are expected to show declines.

Fir does not antictipate any stimulation to the market next quarter. Pine also sees no liberal easing in the mortgage market in the near future which would encourage second-quarter loadings.

The plywood industry was the only one in forest products to forecast an increase, estimating an upsurge of 10 per cent for the second quarter over a year ago.

Paper and pulp are expected to show an increase of 6.4 per cent over the 21,734 cars shipped in this period a year ago.

NEW OFFICERS of Western Pine Assoc., from left: S. V. Fullaway, Jr., re-elected secretary, manager; P. V. Burke, Sacramento Box & Lumber Co., second vice-pres.; A. L. Helmer, Polson Lumber Co., outgoing president presenting gavel of 5 species of wood to A. B. Hood, Ralph L. Smith Lumber Co., new president of Western Pine Assoc.; J. D. Bronson, Cascade Lumber Co., first vice-pres.; C. T. Gray, American Forest Products Corporation, re-elected as treasurer.

New Officers

President: A. B. HOOD, *Ralph L. Smith Lumber Co., Anderson, Calif.*

First Vice Pres.: J. D. BRONSON, *Cascade Lumber Co., Yakima, Wash.*

Second Vice Pres.: P. V. BURKE, *Sacramento Box & Lumber Co., Sacramento, Calif.*

Treasurer: C. T. GRAY, *American Forest Products Corp., San Francisco, Calif.*

Sec'ty-Mgr.: S. V. FULLAWAY, Jr., *Portland, Ore.*

Ass't Sec.-Mgr.: W. E. GRIFFEE, *Portland, Ore.*

Directors at large: E. C. RETTIG, *Potlatch Forests, Inc., Lewiston, Idaho and* ROBERT A. MURPHY, *McCloud River Lumber Co., McCloud, Calif.*

NLMA directors: E. C. OLSON, *Diamond Match Co., Chico, Calif.*, H. B. JAMISON, *Byles-Jamison Lumber Co., Fresno, Calif.*; J. D. BRONSON, *Cascade Lumber Co., Yakima, Wash.*; A. L. HELMER, *Polson Lumber Co., Polson, Montana;* WALTER S. JOHNSON, *American Forest Products Corp., San Francisco, Calif.*; U. R. ARMSTRONG, *Hallack & Howard Lumber Co., Winchester, Idaho.*

Member of NLMA executive committee: A. L. HELMER.

AFPI trustee: J. D. BRONSON.

Do-It-Yourselfers Bolster Lumber Market

Western Pine leaders anticipate modernization work will sell lumber.

BOTH SOUR AND SWEET NEWS was delivered to some 440 delegates at the annual Western Pine Association meeting in San Francisco, Calif., March 6-9. Some 190 member mills of the Association were represented.

According to W. E. Griffee, assistant secretary-manager, housing starts in the first half of 1957 probably will be at least 10% below the relatively good first six months of 1956. Housing starts for 1957 are estimated at between 900,000 to 1,100,000. Last year they were 1,120,000.

"Tight money gets most of the publicity" said Griffee, "but since the first few years after the war it has become progressively harder for the average home owner to pay for a new home. The U. S. Savings & Loan League points out that in the last 10 years, while home building costs increased only 37% and average family incomes risen 42%, the price of the average new house is up 82%, because lots are more expensive, houses are larger and there are more gadgets.

"This means that on the average, it is 22% harder to keep up payments on a new home than it was 10 years ago."

On the other hand, according to George A. Holden, Diamond Match Co., Spokane, Wash., chairman of the association's promotion committee, the do-it-yourself and builders plying their trade in remodeling and modernizing have had a remarkable effect upon the nation's lumber markets.

"The do-it-yourself," said Holden, accounted for about half of the modernizing expenditures last year. However, the building trades are the real backbone of the modernizing market, just as they are in all home construction.

"Without this vigorous modernizing market the lumber industry may well have suffered a setback even more serious than the leveling off brought on by the past year's slowing pace in housing starts."

THE SPEAKER POINTED OUT that remodeling and modernizing expenditures of about $15,000,000,000 exceeded new home construction by more than 1½ billion dollars. And indications are such spending may reach as high as $17,000,000,000 this year.

Another good piece of news was that Sheet-Board, a slick looking new lumber sheathing panel developed by the Western Pine Association Laboratory in Portland, Ore. has been accepted for use in FHA construction.

Owen C. Sawyer, Peshastin Lumber & Box Co., Peshastin, Wash., chairman of the association's research committee said that Sheet-Board may be used for wall sheathing, sub-flooring and roof decking in home construction. It consists of standard thickness boards laid side by side and sandwiched and bonded between layers of tough kraft paper. It can be manufactured in any width, though the 2x8 foot size is most popular so far.

"The panel retains the workability and strength of lumber" Sawyer pointed out, "while its convenient size allows high speed installation and eliminates waste. It is currently being manufactured by one mill, and has been tested with excellent results in actual home building projects in Idaho."

Association president A. L. Helmer, Polson Lumber Co., Montana, told the group that the production of lumber—America's first industry—will remain one of the nation's most important businesses.

"We are just beginning," he declared.

Secretary-manager S. V. Fullaway, Jr., Portland, Ore., said the western pine industry now is "an eight-billion foot producer", with 375 member companies making up the association. He reported that the association's growth has resulted in a staff increase to 89, of whom 30 are lumber inspectors.

WALTER M. LEUTHOLD, Deer Park Pine Industry, Inc., Deer Park, Wash., president of the National Lumber Manufacturers Association, told the group that 1957 was going to be a crucial period in the national economy. He said that the administration had proposed the largest budget in the Nation's history and at the same time was asking business and labor to check inflation.

He stated that the NLMA had written President Eisenhower, and members of Congress protesting the size of the budget, and had received a very good response. He urged individual members of the Western Pine Association to write their representatives in Congress.

(*Continued on page* 82)

NEW OFFICERS of West Coast Lumbermen's Assn. Standing, from left: secretary Harris Smith, Portland, Ore.; vice-president, Washington, C. Henry Bacon, Jr., Shelton; executive vice-pres., H. V. Simpson, Portland; treasurer, E. H. Jenkins, Springfield, Ore. Seated, from left: senior vice-president Judd Greenman, Portland; president R. M. Ingram, Aberdeen, Washington; vice-pres., Oregon, George C. Flanagan, Medford; vice-pres., California, Jack Fairhurst, San Rafael.

WCLA PRESIDENT Nat B. Giustina, right, accepts Mac Wilkins plaque award from Don Ostensoe, Oregon Advertising Club, for association's top advertising program, headed by Director Robert Mahaffey, Portland, Oregon.

Lumber Leaders See New Threat to Eastern Markets

WEST COAST LUMBER, particularly Douglas fir, faces new competitive threats from both within and without the lumber industry in the year ahead, plus higher production costs.

Members of West Coast Lumbermen's Association, meeting in Portland, Ore., on March 27-28, were told by their president Nat Giustina, Giustina Brothers Lbr. Co., Eugene, Ore., that competition with other building materials is lumber's biggest long-range problem. Individual companies in steel, aluminum and wallboard are spending more on advertising and other sales promotion than the entire West Coast lumber industry.

"One aluminum company's TV expenditure alone is more than twice what our industry spends for everything," he said. "The lumber industry will have to spend more money on promotion and advertising or lose ground to its competitors."

H. V. Simpson, executive vice president, said the West Coast industry is planning a major fight against "continued efforts" of competitors to force moisture content and other regulations on fir lumber.

Another "battle of the boards" has been added to the still-pending issue of ¾-inch versus 25/32-inch and has been started by other regional lumber interests fighting competition of Douglas fir lumber produced on the Pacific Coast, according to Mr. Simpson.

It is expected to climax at a hearing called by the American Lumber Standards Committee in Washington, D. C., May 16. Southern interests, which must dry their lumber, seek to impose a strict moisture content rule on fir, much of which is traditionally shipped and used in the "green" stage.

Proposed is a 19 per cent maximum moisture content for one and two-inch lumber excluding uppers and thicker dimension.

Present West Coast rules, which have been accepted by the building industry nation-wide and have satisfactorily met all housing requirements, call for a 19 per cent "average" for kiln-dried dimension lumber and boards but not necessarily a maximum in relation to the 1⅝ in. on in-

(*Continued on page 76*)

New Officers

President: ROBERT M. INGRAM, *E. C. Miller Cedar Lumber Co., Aberdeen, Wash.*

Vice Pres.: JUDD GREENMAN, *Portland, Ore.*

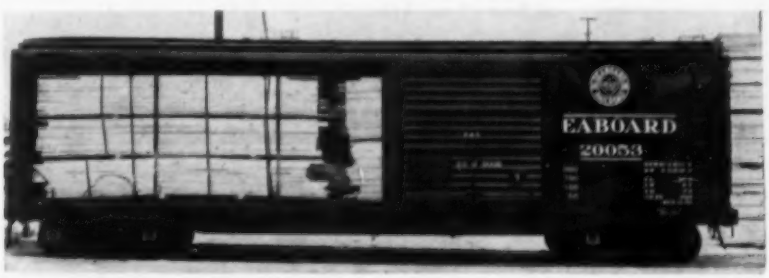
State vice presidents: Washington, C. HENRY BACON, JR., *Simpson Logging Co., Shelton;* Oregon, GEORGE C. FLANAGAN, *Elk Lumber Co., Medford;* California, JACK FAIRHURST, *Fairhurst Mill Co., San Rafael.*

Executive vice pres.: H. V. SIMPSON, *Portland, Ore.*

Treasurer: E. H. JENKINS, *The Booth-Kelly Lumber Co., Springfield, Ore.*

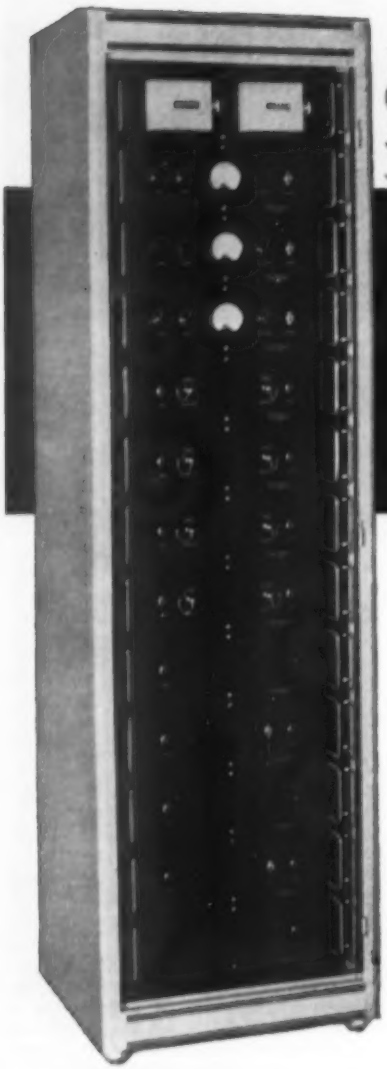
Secretary: HARRIS E. SMITH, *Portland, Ore.*

NLMA PRESIDENT Walter Leuthold, Deer Park Line Industry, Deer Park, Washington, chats with WCLA president Nat B. Giustina.



RECOMMENDED AS BEING most suited to loading of packaged lumber with mechanical methods is this Seaboard Air Line box car, equipped with one 20 foot door at each end, on both sides.

A New Concept in Continuous Moisture Control



A new design— new simplicity— new standard for dependability
THE ALL NEW...

LAUCKS Sentry® CUSTOM
CONTINUOUS MOISTURE DETECTOR

Since 1951, Laucks engineers have gradually and consistently expanded the functions of the SENTRY to include every phase of practical automation . . . keeping in mind, however, that no electronic advancement is purely a product of the laboratory. Each adaptation has been time-tested in the field, where ultimately a system must succeed or be discarded. We sincerely believe that the new 1957 SENTRY Custom—a marked departure from all preceding designs—incorporates every possible improvement that you—our customers—have dictated. As its name implies, the Laucks SENTRY Custom is built precisely to your specifications.

SENTRY systems are available for all forest products such as plywood, lumber, paper and particle board, and for many unrelated or non-cellulose materials. You are cordially invited to write for further information.

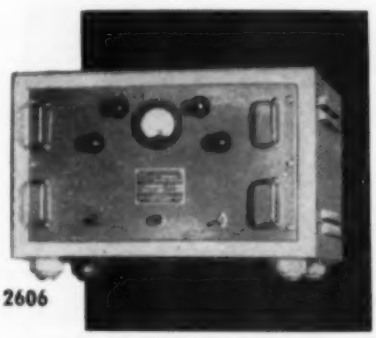
11 ALL-NEW FEATURES

1. Light weight, unitized construction permits easy, plug-in replacement.
2. Built-in overload protection with visual indicators in each circuit provides an important extra measure of dependability.
3. Stack mounting technique affords ready serviceability—guards against deterioration from heat or vibration.
4. All components meet J. A. N. specifications.
5. Automatic power regulation for alternating and direct current—system is unaffected by wide variations in line frequency or voltage.
6. Drift is eliminated through use of temperature - compensated components.
7. Entire system is grounded and shielded — control console may be remoted to any desired location.
8. Plug-in units available for additional levels and/or channels, or for counting, recording and dryer control.
9. Basic system may be expanded as new requirements develop.
10. Moisture range expanded from zero to fibre saturation.
11. New simplified control with two knobs operating the entire system.

AND FOR THE BUDGET MINDED . . . .

THE NEW LAUCKS Sentry® SPECIAL

Priced under $4000, the SENTRY Special incorporates, in principle, all of the circuitry of its "big brother" but is scaled to meet the basic requirements of the smaller plywood mill or woodworking plant. As with the Custom, the SENTRY Special provides 100 percent inspection of moving veneer, simplified moisture level selection and automatic marking. The new SENTRY Special is a fully guaranteed precision instrument, capable of meeting the most exacting moisture control requirements at a price well within the range of the small producer.



Laucks Laboratories, Inc., 1201 Poplar Place, Seattle 44, Wash. FRanklin 2606

A leader in wood technology for 49 years

NICHOLSON 60-INCH mechanical barker installed at Canadian Western Lbr. Div., Crown Zellerbach Canada, Fraser Mills, B. C. Second Nicholson barker in new barking plant is 50 inch unit.

New Barking and Chipping Plant Aids Wood Recovery

Crown Zellerbach Canada completes plant which adds 5000 units per month to chip output.

BECAUSE OF THE GROWING IMPORTANCE of handling clean wood in its various processing plants and the new emphasis on pulp chips, Canadian Western Lumber division of Crown Zellerbach Canada has built a new and distinctive barking and chipping plant separate from the lumber, plywood and shingle operation at Fraser Mills, B. C.

This $1,200,000 plant, housed in a 170' x 85' building of wood frame construction on wooden piling, is located about 700 feet up the Fraser River so that logs barked and handled there may flow with the current to the shingle mill, plywood plant and sawmill of Canadian Western downriver.

UNBARKED LOGS are hauled up in barking plant. Fraser River supplies natural transportation.

Plant Utilizes Shavings

Shavings from the planer mill at Canadian Western which in the past have been burned will in future be converted into pulping material, according to F. A. Drumb, president of this division of Crown Zellerbach Canada.

Shavings will be added to pulp shipments for the Ocean Falls mills for conversion into paper. Initially it is planned to divert 45 units of shavings from Canadian Western at Fraser Mills into the chip barges daily.

Computed on the basis of 500 board feet per unit of shavings, this will represent an annual recovery of 5,400,000 board feet of timber.

Laboratory tests show that a small percentage of each barge load of chips can be made up of shavings without affecting pulp quality.

At present, shavings from five planing machines have been going direct to fuel storage bins or the boiler room. An additional "dropout" will be installed from each planer to enable shavings to be diverted to the chip conveyor belts.

Bark from the new Fraser Mills barker plant is being used to replace the diverted chips.

This marks another important step in the utilization program at Fraser Mills.

This effects economy in transportation and tends towards a streamlined production system throughout.

Unique in several features, this plant is one of the few to be built in the Pacific Northwest that carries out the idea of a barking and chipping operation in a building entirely independent of other processing. Completion of the plant is a major step in a $3,500,000 modernization program by the company.

Need for developing a greatly increased supply of chips by Canadian Western resulted from the establishment of the $15,000,000 kraft pulp mill at Duncan Bay by Elk Falls Co., another Crown Zellerbach Canada division, which will produce 500 tons of pulp daily and require nearly 30,000 units of chips monthly. All these chips will not be provided from Canadian Western. In fact, a score of sawmills outside the Crown Zellerbach organization are supplementing the supply from company sources. A small volume of chips will be produced at Duncan Bay at the new sawmill soon to be in production. For emergency purposes, chips may be made in the present woodroom built to service the Elk Falls Co. newsprint mill.

THE NEW PLANT ON FRASER RIVER will play its part in virtually doubling the supply of chips available for the company this year. The additional 4000 to 6000 units per month will be sent to the Elk Falls kraft mill. It is significant that Canadian West-

(*Continued on page* 74)

LEADERS AT joint U. S.-Canadian convention of the Western Forest Industries Association and Western Forest Management Assoc. in Vancouver, B. C., are shown from left: Wally Spence, sec.-treas., WFMA; Telford Germyn, vice-pres., WFMA; C. B. Swanson, pres., WFMA; John Buchanan, pres., WFIA; Joseph McCracken, man. director, WFIA; Frank Ter Bush, field rep., WFIA.

Leaders Review Housing

HOW TO GET HOME CONSTRUCTION back in stride in the U. S. and Canada is one of the top problems for the lumber business as well as the building industry, delegates to the joint convention of the Western Forest Industries Association of Portland, Ore. and the Western Forest Management Association of British Columbia were told by speakers representing both countries in a meeting held in Vancouver, B. C. on Mar. 22 and 23.

These two organizations have much in common, although the major concern of the British Columbia group is opposition to the present system of forest management licensing in the west coast province.

The housing situation was discussed in some detail by Nels Severin, first vice-president in charge of legislation, National Association of Home Builders, Washington, D. C., and Daniel L. Goldy, regional administrator of the Bureau of Employment Security, Seattle. Others who contributed addresses on the general subject of the housing program in relation to lumber marketing and production included J. Herbert Stone, regional forester of Region 6, Portland.

Mr. Severin told delegates that mortgage finance was the lifeblood of the housing industry, which in turn was one of the main factors in the continent's lumber market. The fact that home construction was in a slump, due to tight credit and other government-imposed restrictions, was one of the principal reasons for the current decline in lumber sales.

A SLOW-UP IN HOUSING STARTS, said Mr. Severin, set up a chain reaction all the way through various branches of wood-using construction and also in many other lines because fewer houses built meant fewer community facilities and improvements, fewer schools and churches, reduction in slum clearance, water, sewer and electrical installations, etc., all of which played their part in maintaining the national economy.

Mr. Severin said that he and his associates were concerned about the fact that housing starts in the U. S. had declined to the rate of 910,000 a year, although production and other growth indices would have justified substantially more than 1,000,000 starts.

"House construction," declared Mr. Severin, "has been singled out as a whipping boy by the government in its attempt to curb inflation. Housebuilding actually is the bellweather of the whole economy and to apply the brakes to that essential activity cannot fail to have widespread adverse repercussions. Housing starts in 1955 totalled 1,416,000. There has been a drastic 36% reduction. Our problem is to change the present attitude in Washington which is that housing is postponable."

Mr. Severin said that his association had urged four measures designed to rally the home building industry from its "body blow":

- Increase interest rate on G. I. home loans to correspond with the FHA rate so as to stimulate contrator's interest.
- Modernize FHA mortgage credit terms.
- Authorize a $2.5 billion appropriation to support mortgage financing.
- Create an addutuibak $2 billion credit for special assistance in areas critically short of housing.

Mr. Goldy applied some of the statistics from the Stanford Research analysis of the forest industry to the present housing situation, pointing out that population would continue to grow rapidly during the next decade, accompanied by a rise of 700,000 a year in the labor forces and an increase in household formations—factors which obviously meant that an acceleration of home building rather than an interruption or decline was economically justified. The present situation merely was damming up requirements that would eventually have to be met.

THE INDUSTRY COULD LOOK FORWARD to a rising demand for lumber but declining ratio of lumber use per unit, and it could also expect rising prices for lumber—a fact which in itself might encourage use of other materials, said Mr. Goldy. It would also face increased competition for labor in the woods and in processing plants where women could not be suitable employed.

Mr. Stone described the program for maximum utilization of the national forest. Many of the areas being logged were being artificially re-seeded since natural regeneration in most areas would not be sufficient to meet growing demands for timber.

One serious problem confronting the national forest areas was the withdrawal of forest for water and hydroelectric power use. Industry and the country as a whole must reconcile themselves to the necessity for maintaining volume of production from a gradually declining forest area.

Most of the members of the Western Forest Management Association are small or medium-sized logging operators, and their president, C. B. Swanson, of Barze Logging Co., Theodosia Arm, made it clear that they are not satisfied with the present plan of administering the forests in B. C. "The market is the place to decide what will be paid for timber, not behind closed doors at secret conferences," said Mr. Swanson, taking a swing at the license system which in effect has allocated large tracts of forest to a few large companies with long-term multi-million dollar investments in processing plants such as pulp mills.

Sawmill Manual Published

• A new handbook designed to help operators of small sawmills to produce more and better finished lumber from a given quantity of logs is available from The American Society of Mechanical Engineers. The booklet has four chapters dealing with Machinery, Saws, Mill Setup and Operation and Trouble Shooting. Each section contains specific recommendations and suggested procedures for improving performance.

A small sawmill is considered to be one producing less than 20,000 board feet per day.

The 62-page volume was prepared under the direction of a committee sponsored by ASME whose services were volunteered over a period of 3½ years. Chairman of the committee is Thomas D. Perry, consulting engineer, Moorestown, New Jersey.

DON BRANNAN, sawmill superintendent, pushes button controlling Turner resaw thickness-cut. Thicknesses are pre-set on circular dial above button and button is pressed to actually prepare the machine for the change which is made automatically as last cant goes through the machine.

Resaw Ups Idaho Mill's Cut

Semi-automatic equipment added by Salmon River Lbr. Co. boosts recovery.

MERRY-GO-ROUND to resaw on offber end of Turner resaw for cants needing further manufacture.

OFFBEAR END of new Turner resaw. Operator raises stop when cant needs further manufacture. When cant hits stop, device raises arms, drops cant to chain which starts it around on return to resaw. Line on rear arm actuates switch which permits board to go through to edger.

ADDITION OF A 62-INCH TURNER horizontal resaw and an Evergreen 4x48-inch edger has upped the cut of Salmon River Lumber Co. at Riggins, Idaho by 20 per cent. The units also allow more effective sawing of the smaller logs beginning to be utilized in the central Idaho mill.

Average cut now is 65,000 board feet on Salmon River's single shift.

Smaller logs are split on the Klamath-Iron Works six-foot band headrig, as are cants slabbed off the larger logs. Thus heavy slab is saved on the smaller logs, resulting in greater lumber recovery. Split logs and cants are delivered to the resaw by transfer chain off the headrig offbear roll case. The headrig offbearer operates a stop and a transfer chain to the resaw feed.

The resaw operator controls the feed chains which hold back cants when the resaw becomes congested. Two-inch and thinner stock goes directly from the headrig to a Phoenix 6x54-inch edger.

The resaw roller feed table is hydraulically controlled with electric valves. The operator sets an arrow on a control panel to the desired thickness to be sawed. He then presses a button on the panel when ready to "put the change into the machine".

A foolproof device on the machine eliminates any possible change in feed height during sawing. A plate on the offbear end is depressed as the cant passes. This cuts off any possible vertical movement while the cant goes through. When the cant leaves the machine, this plate springs back up and trips a switch. This allows any change made at the control box to actuate the electric valves controlling the hydraulic movement of the feed table and the consequent thickness of the next cut.

FOR ADDITIONAL RESAW CUTTING the resawman raises a bumper on the offbear end. This actuates an electrical circuit making an automatic return of the remaining part of the cant through a merry-go-round. When the cant hits the bumper it breaks a switch. This raises three steel arms which slide the cant onto a chain transfer to a rubber conveyor, thence to another chain and the resaw feed. The stop also drops as soon as the cant is lifted.

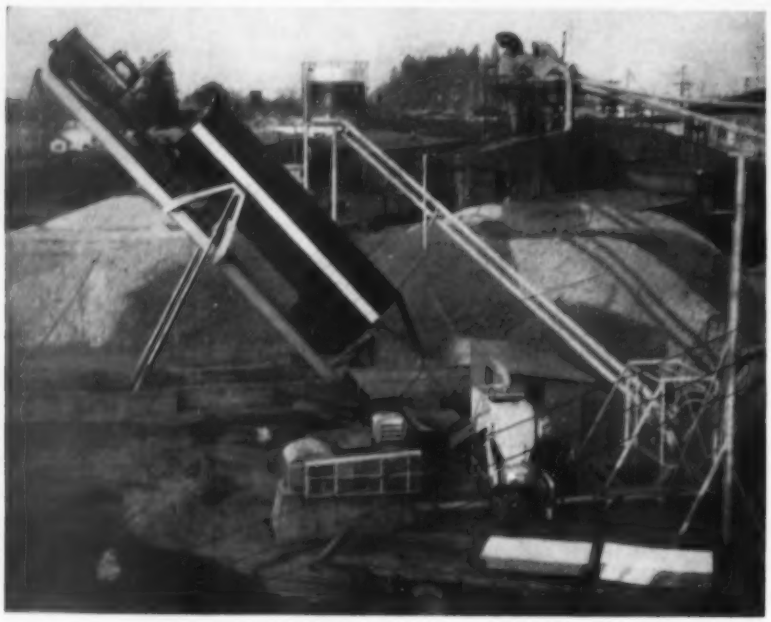
Short steel stubs hold the sawn board on the bottom onto the arms and keep it from going back through the merry-go-round. A light wire rope attached to one of the steel arms actuates a switch with a three-second delay — allowing time for the cant transfer—which drops the arms, making ready for another cant and allowing the sawn board to continue on through the mill.

The Evergreen edgerman foot-controls another bumper which allows him to pick anything from the offbear end of resaw that needs edging. Material is bumped from the offbear

(*Continued on page* 78)

Job Saving Ideas

Chip Unloading Device Permits Use of More Truck Types



A grain-type "load dumper" for unloading truck-hauled chips at pulp plants opens up increased utilization possibilities. Two Hydr-o-Flex dumpers are now operating, one at Oregon Pulp & Paper Co., Salem, Ore., the second at The Crossett Co., Crossett, Arkansas.

Chips arriving via tractor-pulled semi-trailer are unloaded by driving the complete haul unit (including tractor) onto the unloader platform. One end is then elevated 50°, discharging chips by gravity.

This type of unloader makes practical utilization of various sorts of tractor-drawn units for hauling chips. Commercial trucking firms now see prospects of using regular highway cargo semi-s for chip hauls, either on a continuous or intermittent basis. These offer greater load capacity than now is legally possible on public highways by any other means.

The Salem installation (shown in photo) represents the combined efforts of Oregon Pulp & Paper management, Consulting Engr. Harold Wahl; McManama & Co., construction contractor; Air-O-Flex Equipment Co. (Minneapolis, Minn.), manufacturer of the components, and J. J. Ross Mill Furnishing Co. (Portland, Ore.), representative for Air-O-Flex in the Pacific Coast and Rocky Mountain states.

Telescopic lift cylinders tilt the platform up to the 50° final discharge angle in 90 seconds. Cylinders are activated by a hydraulic unit, housed in small building near the platform, consisting of two 10 hp. motors. Each drives a pump delivering fluid to cylinders at a pressure of 800 psi.

The unloader is built to discharge a 15-unit load of chips in three minutes. The associated system for disposing of the chips has capacity for handling 30 units per hour.

Chips slide directly into a 15-unit surge bin, are removed by a chain conveyor delivering to a Rader Pneumatics high-pressure conveyor system. An RP 4-way "air switch" diverts the flow to two open storage piles or to two silos. Of the four 10¾-in. OD pipes, the storage transports are about 400 ft. long and provide a free throw of around 80 ft. at the discharge; those leading to silos are 650-ft. long, elevating 110-ft. enroute.

Scales are available for incorporation with the Hydr-o-Flex platform for print-weighing the transport units before and after dumping.

Increased interest in chip hauling by mills in the various states indicates the need for quick-unloading devices like this, which permit a variety of hauling units to be used. This in turn will allow smaller mills to enter into a chip delivery program.

Portable Light Facilitates Truck Unloading at Night

At Deer Park Pine Industry, Deer Park, Wash., truck unloading at night is simplified by use of this portable lighting unit. Left-hand view shows light supports telescoped into position for moving or storage. View at right is of boom extended to full height of 30 feet. There are eight 150-watt spotlights. Power is provided by 10 KW Kohler light plant. This unit is mounted on timber skids so that it can be easily pulled into position by a truck.

Postcards Report on Shipments, Maintain Good Customer Relationships

PLEASE

tell us what you think of this shipment — fill out this card and put it in the mail.

Thanks.

Southwest
LUMBER MILLS, INC.

Will you please tell us what you think about the manufacture, grade, dryness and arrival condition of this car? This will help us to give you the kind of service and products you want in the future. Just check and mail this card.

• • •

Car ____ Your No. ____ Our No. ____

	Good	Fair	Poor
Manufacture			
Grade			
Dryness			
Unloading Condition			

Comments: ____

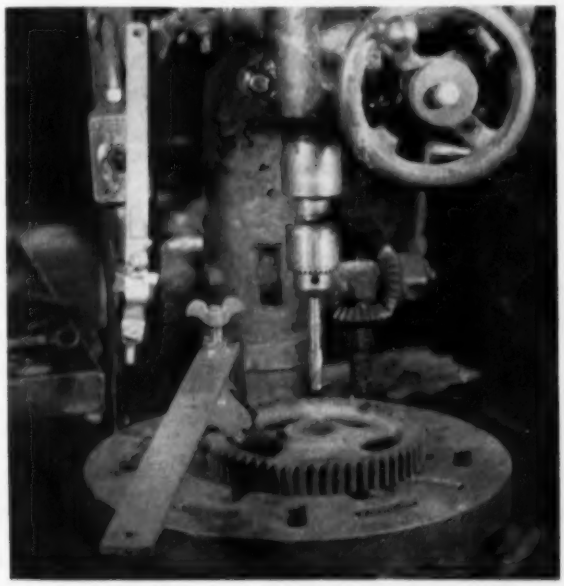
Date ____ Checked by ____ Signed ____

EXCELLENT RELATIONSHIPS are maintained with customers through a reporting system used by Southwest Lumber Mills, Inc., Phoenix, Ariz. With each shipment, a folder containing a postcard is sent for reporting condition of lumber to the head office. Division managers receive copies of replies, which are posted in the plant. Card has room for rating of manufacture, grade, dryness and unloading condition. Some of the replies have such statements as: "Nice and bright; if the quality stays, will buy continually".

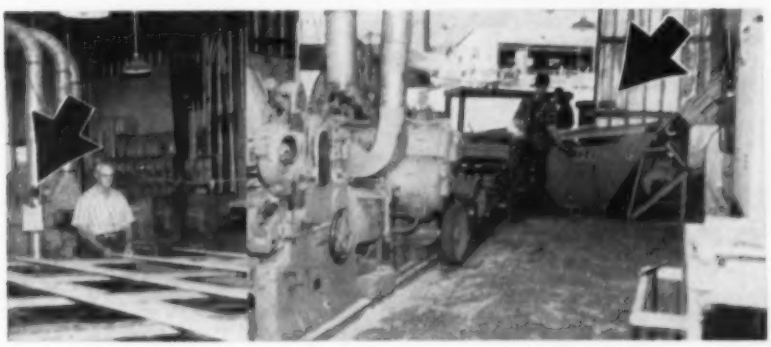
Unit Holds Knives for Sharpening

DURING SHARPENING, sidehead knives are held positively by a device made in shops of Southwest Lbr. Mills, Inc. Ramon Jaurequi sharpens knives in firm's new planing mill at Flagstaff, Ariz. and designed collars to fit extension of head-holding shaft for Stetson Ross sharpener. The ¾" thick collars have slots cut in their circumferences, a ⅜" steel key (arrow) is hinged to drop into slots, hold knives in position. Collars serve various heads.

Hold Down Tool for Drill Press



A DRILL PRESS hold-down tool which holds all shapes, eliminates the V-block and centers all round shapes instantly has recently been developed by an Oregon firm. This hold-down tool snaps onto the drill press table instantly and can be adjusted to different sizes and shapes with the use of a wing-nut. As shown in picture, it holds the gear onto rim. Tool is made in two different sizes, has won safety approval of Ore. State Industrial Accident Comm.



Signal Lights Aid Planer

FEATURE OF Stanley J. Weidman, Inc. planing mill, Durango, Colo. is a signal system for planer feeder. With aid of lights, delays are minimized in the new plant, which went into operation last year. Man controlling feed to 10-knife Yates-American A-62 planer stands with his back to machine. If there is some reason to stop machine, such as entanglement of lumber at discharge end or at nearby trimmer, grader, stationed beyond the planer, pushes a button (left arrow). This flashes a red signal up on wall opposite man feeding the machine (right arrow) and he stops feed. When difficulty has been corrected, red light is turned off and an amber signal is lighted.

Plywood Department

Hardwood Plywood Importers Refute Threat Charges

• Refuting recent charges made by U. S. Congressmen that imports of foreign made plywood are damaging America's domestic plywood industry, the Imported Hardwood Plywood Association, Inc. at its March 5 meeting in San Francisco, Calif. submitted data substantiating their own statements. Steps were taken by the board of directors to establish representation in Washington, D. C. and to initiate a counter-attacking action program.

Facts brought out by IHPA are:

• Success of foreign plywood is due to preference of manufacturers for Lauan and other Japanese plywoods over domestic gum and other domestic plywoods. Domestic suppliers have commented on better quality of the Japanese product.

• Bulk of plywood imported into U. S. is Lauan, Sen, Birch and other hardwoods, in doorskins for flush type doors—probably constituting 80 to 90 per cent of total hardwood plywood imports. There isnt enough domestic production of this type of plywood to meet demand of flush door factories.

• Much of domestic plywood is not suitable for purposes for which better manufactured foreign plywood is used. Production data of domestic hardwood plywood industry ars misleading, because of integration of plants and use of captive plants by furniture and door factories.

• Figures on Japanese plywood importations are on a square footage surface measure rather than the American basis of 3/8 inch net. Since approximately 80 per cent of Japanese plywood is in 1/8 inch doorskins, actual footage on a 3/8 inch basis would be only about 50 per cent of the footage, on the American square foot basis surface measure.

Newly appointed managing secretary of IHPA is Gordon Ingraham, whose office is in San Francisco.

Present at the meeting were six executives representing the regular and associate members of the Association which constitutes approximately seventy per cent of the plywood imports into the United States from Japan. These men were: Jan van Wyngaarden, The Pacific Coast Division, W. R. Grace & Co., San Francisco; H. Rainer, The East Asiatic Company, Inc., San Francisco; Thomas A. Parker, Getz Bros. & Co., San Francisco; John R. Osgood, Robert S. Osgood Company, Los Angeles; S. Nobe, Pan Asiatic Trading Co., Inc., Los Angeles; Howard H. Wickersham, Getz Bros. & Co., Pasadena.

Head of Plywood Firm Optimistic

• John Bene, president of Western Plywood Company, Ltd., Vancouver, B. C. in his annual report to shareholders expresses optimism in the long-term strength of the west coast's lumber and plywood industry.

The company's annual statement showed earnings up 27 per cent over 1955 for the fiscal year ended Oct. 31, 1956.

Net earnings for the year totalled $1,417,459, compared with $1,112,-588 in the previous 12 months.

Bene said that during the year about $2,000,000 was invested in new plant and equipment, an all time high in capital expenditure for the company.

"More capacity was added to our two plants in Vancouver and we completed construction of a new plant in Edmonton," he said.

The Edmonton plant began partial operation in September.

• E. E. (Mike) Gregg, vice president Western Plywood Co., Vancouver, B. C., has been awarded the highest honor of the Boy Scout Association in recognition of "services of an exceptional character". He was president of the association when membership in British Columbia climbed 3,600 in a single year.

Hardwood Institute Stresses Promotion

Renewed emphasis on promotion of American-made hardwood plywood and a continuing fight for relief from low-price foreign imports of plywood emerged as the main activities in 1957 for the Hardwood Plywood Institute at its annual meeting in Washington, D. C., February 14, 15.

C. U. Gramelspacher, outgoing president, said that Japanese imports have risen 4000 per cent since 1951, chiefly because low-paid labor enables Japanese to sell their plywood for less than the cost of manufacturing in the United States. Imports now take 46 per cent of the American market and have forced at least 18 plywood mills to shut down, Gramelspacher said.

In the trade promotion section of the meeting, plans were announced for promoting the value of the domestic product on the basis of the Institute's rigid quality control program.

Theme for 1957 will be the "unmistakeable touch of elegance" which American-made hardwood plywood lends to room settings in the form of furniture, wall paneling, flush doors and wood kitchen cabinets, according to Richard D. Behm, trade promotion director.

In addition to centering its advertising, consumer education and publicity activities around this theme, Behm reported that the Institute has taken a leading role in a nationwide promotion of "better office in wood" in concert with 11 other trade associations in the wood industry. Behm, who serves as chairman of the "B. O. W." steering committee, said the promotion is tentatively planned for September. A "test" promotion took place in St. Paul-Minneapolis March 10-17.

In addition, the HPI Board of Directors approved plans for stepped-up activities in merchandising hardwood plywood products at the retail level in the furniture and lumber dealer fields. Details of the twin programs, to be developed in cooperation with the National Retail Furniture Association and the National Retail Lumber Dealers Association, are to be announced later.

New president of the National Association of Home Builders, George Goodyear, paid a tribute to the role of American-made hardwood plywood in home building, caused by improved quality, economies of installation and the value of the material in promoting the sale of homes.

He called for the support of the Hardwood plywood industry and other industries concerned with the home building market for the NAHB's drive to ease the flow of mortgage credit.

Eric Larson, president of the Larson Plywood Company, Sheboygan, Wis., was elected new president of the Institute. B. P. Adams, Jr., U. S. Plywood Corporation, Orangeburg, succeeded Mr. Larson as vice president. Charles E. Close, managing director of the Institute, was renamed secretary-treasurer.

Firm Pushes More Specialty Product Items

• Julius and Muckey, established in 1956, by John J. Muckey and Morton J. Julius, as an affiliate of the Reisen Lumber & Millwork Co. of Union, New Jersey, is handling specialty products.

They are now the largest distributor of Ply-Veneer in the United States. They have added other products to their line, including chipboard products (particle boards), packaging hardware, and other associated specialty products. Now they are looking for items like foreign specialties, special shook for the trunk and luggage trade, good cut-to-size sources and dimension mills, special hardware and applications for the packaging and crating trade, cushioning materials and other protective items.

SUPER SIDING has solid lumber core, fir plywood face, is cut to 3½° bevel. It was developed through cooperative research by Oregon Forest Products Laboratory and Diamond Lumber Company.

AFTER PANEL is bonded with exterior type adhesive in the hot press, it is ripped into 12" x 8' lengths and bevel-sawn on tilt-table Gunderson vertical resaw. Siding has ½" shiplap groove.

New Siding Offers Economies

• A new wide-lapped bevel siding which is a three-way combination of lumber, fir plywood and resin fiber overlay shows a potential of providing savings of up to $200.00 per house, compared to competitive types of siding.

The new product, called Super Siding, was developed by the Oregon Forest Products Laboratory in Corvallis, Ore. and the Diamond Lumber Company, Portland, Ore. It combines a solid wood core with the two-way strength of fir plywood and surface paintability of Crezon, a smooth, medium-density resin fiber overlay made by Crown-Zellerbach Corp.

The new material, the result of years of research, is a siding which utilizes common boards, is available in wide widths, presents a smooth, defect-free surface, and is competitively priced with other siding materials.

Most significant advantage of Super Siding are:

- May be applied directly over studding, eliminating any need for sheathing. This can save up to $125 per unit.
- Costs 40% less than some competing siding materials.
- Has a solid lumber core which is cut on a 3½° bevel so that the siding may be nailed flush against studs with no necessity for furring strips or wedges.
- Comes in panels which are 12 inches wide and eight feet long. One man can handle panel with ease. Each piece has ½" deep shiplap groove rabbetted into thick edge of the panel, to produce a good shadowline on house wall. This groove also makes panels self-aligning.
- Since panels are 12 inches wide with only ½" shiplap groove, total of 11½ inches or 96% of wall coverage is afforded by each piece, opposed to approximately ten inches or 80% with many competitive siding materials. A potential savings of up to $40 per thousand feet of wall coverage in average house is possible because of this extra width.
- Siding is pre-dipped at mill in toxic water-repellent pentachlorophenol preservative dip which makes it termite-resistant, should make paint go on easier and stay on longer.

PRINCIPALS IN development of Super Siding examine new product. From left, Bruce Parsons, Crown Zellerbach Corp.; Evan Davies, Diamond Lbr. Co.; Bob Jones, American Marietta Adhesive Co.; Gene Knokey, Diamond Lbr. Co.; Ed Stalder, C-Z Corp.; Ron Freshour, Ore. Forest Products Lab.; Roy Gould, Diamond Lbr Co.; Jack Grantham, Ore. Forest Prod. Lab.; Hut Theller, C-Z Corp.

The siding manufactured by the Diamond Lumber Company, Tillamook, Ore., is laid up in 4x8 sheets and then ripped into 12" strips. Core is 1x4 fir lumber. Both sides of core are faced with two plys of fir plywood. Smooth surfacing material over the plywood that forms the face of the panel is Crezon, fused to plywood under heat and pressure.

The entire panel is bonded with an exterior type adhesive and placed in a hot press to set the bond. After panels are ripped into 12" strips, strips are bevel-sawn in a tilt-table bandsaw to a 3½° angle, producing two wedge-shaped pieces. Thick edge of panel measures 13/16"; feather edge is 9/32". After ½" shiplap joint is rabbetted into thick edge, panels are

(*Continued on page* 78)

Plywood and Veneer Production for 1956

Firm Name	Location	Lbr. FT BM
U. S. Plywood Corp.		
	Willamina, Ore.	81,000,000
	Eugene, Ore.	80,000,000
	Seattle, Wash.	73,500,000
	Mapleton, Ore.	33,061,000
	Redding, Calif.	47,000,000
	Redding, Calif.	11,000,000*
	Kosmos, Wash.	55,000,000*
Simpson Logging Co.		
	M. & M. Oregon mills, Portland, etc.	153,400,000
	McCleary Plant, McCleary, Wash.	67,000,000
	Shelton Plant, Shelton, Wash.	36,000,000
	Simpson Redwood, Eureka, Calif.	52,408,238
	Simpson Redwood, Klamath, Calif.	40,069,960*
Long-Bell Lumber Co.		
	Longview, Wash.	50,000,000
	Eugene, Ore.	55,000,000
	Gardiner, Ore.	43,030,069
	Weed, Calif.	27,000,000
Roseburg Lumber Co., Roseburg, Ore.		162,919,000
Bohemia Lumber Co., Culp Creek, Ore.		160,000,000*
MacMillan & Bloedel, Vancouver, B. C.		154,427,000
Cascade Plywood Corp., Lebanon, Ore.		145,000,000
Evans Products Co.		
	Coos Bay, Coos Bay, Ore.	54,870,000
	Roseburg, Roseburg, Ore.	42,806,000
	Vancouver, B. C., Vancouver, B. C.	33,401,000
	Gold Beach, Gold Beach, Ore.	49,560,000*
Coquille Valley Lumber Co., Swiss Home, Ore.		180,000,000*
Port Orford Plywood Corp., Port Orford, Ore.		180,000,000*
Giustina Veneer Co., Eugene, Ore.		146,414,650*
Vancouver Plywood, Springfield, Ore.		135,923,538*
Harbor Plywood Corp.		
	Riddle, Ore.	104,228,000*
	Aberdeen, Wash.	67,109,000
Springfield Plywood Corp., Springfield, Ore.		102,677,000
Cal-Ore Veneer, Inc., Crescent City, Calif.		100,500,000*
Oregon Veneer Co., Medford, Ore.		97,866,664*
Mutual Plywood Corp., Eureka, Calif.		90,000,000
B. C. Forest Products, Ltd., Victoria, B. C.		86,800,000
Northwest Door Co., Tacoma, Wash.		53,750,000
C. D. Johnson Lbr. Corp., Toledo, Ore.		88,260,000
Zip-O-Log Veneer, Inc., Eugene, Ore.		88,000,000*
Douglas Veneer Co., Roseburg, Ore.		87,143,000*
Everett Plywood & Door Corp., Everett, Wash.		86,000,000
Union Lumber Co., Fort Bragg, Calif.		84,223,000*
Canadian Western Lbr. Co., New Westminster, B. C.		83,184,000*
Fort Vancouver Plywood, Inc., Vancouver, Wash.		82,300,000
Diamond Lumber Co., Tillamook, Ore.		80,000,000
Peninsula Plywood Corp., Port Angeles, Wash.		77,981,701
Oregon-Wash. Plywood Corp., Garibaldi, Ore.		75,000,000
Fullerton Veneer & Ply. Co., Ltd., North Vancouver, B. C.		73,030,000*
Anacortes Veneer, Inc., Anacortes, Wash.		70,000,000
Lane Plywood, Inc., Eugene, Ore.		70,000,000
Corvallis Plywood Co., Corvallis, Ore.		66,000,000
Manasha Plywood Corp., North Bend, Ore.		65,530,907
Roddiscraft, Inc., Arcata, Calif.		63,786,129
Wind River Veneer Co., Stevenson, Wash.		63,738,615*
Puget Sound Plywood, Inc., Tacoma, Wash.		63,337,321
Western Veneer & Plywood Co., Lebanon, Ore.		61,845,000
Linn Plywood Corp., Albany, Ore.		60,595,000
Multnomah Plywood Corp., Portland, Ore.		60,000,000
Northern Calif. Plywood, Inc., Crescent City, Calif.		60,497,751
Fortuna Veneer Co., Fortuna, Calif.		60,000,000
Campbell & McLean		
	Eugene, Ore.	58,000,000
	Gold Beach, Ore.	37,000,000*
Medford Veneer & Plywood Co., Medford, Ore.		59,000,000
Willamette Valley Lbr. Co., Dallas, Ore.		57,720,000
Plywood Products Corp., Corvallis, Ore.		56,600,000
Brookings Plywood Corp., Brookings, Ore.		56,332,000
St. Paul & Tacoma Lbr. Co., Olympia, Wash.		56,000,000
Georgia-Pacific Corp., Coquille, Ore.		53,000,000
Astoria Plywood Corp., Astoria, Ore.		52,065,128
Western States Plywood Co-op, Port Orford, Ore.		52,000,000
Western Plywood Co., Vancouver, B. C.		51,294,000
North Pacific Plywood, Inc., Tacoma, Wash.		50,000,000
Edward Hines Lbr. Co., Westfir, Ore.		49,996,899
Snellstrom Lumber Co., Eugene, Ore.		49,980,000
Coos Head Tbr. Co.		
	Coos Bay, Ore.	23,139,436
	Coos Bay, Ore.	47,592,908*
Aberdeen Plywood Corp., Aberdeen, Wash.		46,700,000
So. Oregon Plywood, Inc., Grants Pass, Ore.		45,607,674
Marys Peak Veneer, Inc., Corvallis, Ore.		45,000,000*
Umpqua Plywood Corp., Roseburg, Ore.		44,835,592
Martin Bros., Oakland, Ore.		41,758,920
Sonoma Plywood Co., Sonoma, Calif.		41,500,000
Mt. Baker Plywood, Inc., Bellingham, Wash.		41,487,663
Standard Veneer & Tbr. Co., Crescent City, Calif.		38,000,000
Double Fir Plywood, Calpella, Calif.		37,000,000
Grants Pass Plywood, Inc., Grants Pass, Ore.		36,500,000
Custom Plywood, Inc., Grants Pass, Ore.		36,180,275
Centralia Plywood, Inc., Centralia, Wash.		34,700,000
Natron Plywood Co.		
	Springfield, Ore.	33,718,471
	Springfield, Ore.	18,928,305*
The Pacific Coast Co., Sonoma, Calif.		33,078,714
Hardel Mutual Plywood Corp., Olympia, Wash.		32,392,289
Tri-State Plywood Co., Santa Clara, Calif.		32,047,000
Fir-Ply, Inc., Medford, Ore.		30,103,838
Benton Tbr. Products Co., Philomath, Ore.		30,000,000*
Sooke Lake Lbr. Co., Victoria, B. C.		29,829,413
Yamhill Plywood Co., McMinnville, Ore.		29,500,000
Valley Plywood Co., Junction City, Ore.		29,395,507
Three Rivers Plywood Tbr. Co., Darrington, Wash.		27,710,585
Kalpine Plywood, Klamath Falls, Ore.		27,700,000
Lacey Plywood, Inc., Lacey, Wash.		27,621,599
Milwaukee Plywood Corp., Milwaukie, Ore.		27,219,694
Stevenson CO-Ply, Inc., Stevenson, Wash.		27,000,000
Bate Lumber Co., Merlin, Ore.		25,000,000
Tillamook Veneer Co., Tillamook, Ore.		25,000,000*
Durable Plywood Corp., Arcata, Calif.		24,557,694
CPI Veneers, Seattle, Wash.		24,000,000*
Hult Lumber Co., Junction City, Ore.		23,130,000*
Hoquiam Plywood Corp., Hoquiam, Wash.		22,961,286
Lund Plywood Mfg. Co., Crescent City, Calif.		22,000,000
Valley Veneer Co., Grants Pass, Ore.		21,725,004*
Potlatch Forests, Inc., Lewiston, Ida.		21,000,000
West Coast Veneer Co., Crescent City, Calif.		21,000,000*
Mt. Baker Plywood, Ltd., New Westminster, B. C.		20,612,000*
Timber Products Co., Medford, Ore.		20,352,988
Rainier Plywood Co., Tacoma, Wash.		20,000,000
Milwaukie Box & Veneer Co., Milwaukie, Ore.		20,000,000*
W. A. Woodward Lbr. Co., Cottage Grove, Ore.		19,400,000
Interstate Container Corp., Red Bluff, Calif.		18,837,526
Lacey Veneer, Inc., Tacoma, Wash.		19,044,167
Ly-Co Veneer, Inc., Tacoma, Wash.		18,000,000*
Farwest Plywood Co., Kenmore, Wash.		17,950,000
Carolina Pacific Plywood, Inc., White City, Ore.		17,365,000
Seattle Plywood Co., Renton, Wash.		16,000,000*
Crescent Plywood Co., Crescent City, Calif.		15,000,000
Polson Plywood Co., Polson, Mont.		14,321,000
Harbor Veneer Plant, Raymond, Wash.		14,000,000*
Crown-Zellerbach Corp., St. Helens, Ore.		13,649,500*
Pat Veneer Co., Salyer, Calif.		12,000,000*
Elma Plywood Corp., Elma, Wash.		11,962,270
Pope & Talbot, Inc., Port Gamble, Wash.		11,533,783*
Oregon Plywood Corp., Sweet Home, Ore.		9,214,453
Kogap Veneer Co., Medford, Ore.		7,843,820*
Jefferson Plywood Co., Madras, Ore.		6,852,833
Hy-Grade Hardwood Veneers, Olympia, Wash.		6,500,000*
Miami Veneer Co., Tillamook, Ore.		6,193,000*
Canford Lumber Co., Canford, B. C.		5,685,312*
Drain Plywood Co., Drain, Ore.		3,840,890
Wood Products Co-Op, Vernon, B. C.		2,000,000*
Dwyer Lbr. Co., Portland, Ore.		1,402,141*

*Veneer mostly on ⅛" basis.

NOTE — The above is a list of plywood and veneer manufacturers from whom 1956 production figures had been received at press time. This list covers 118 companies and 133 plants. There are 221 plywood and veneer plants in the West.

in the United States

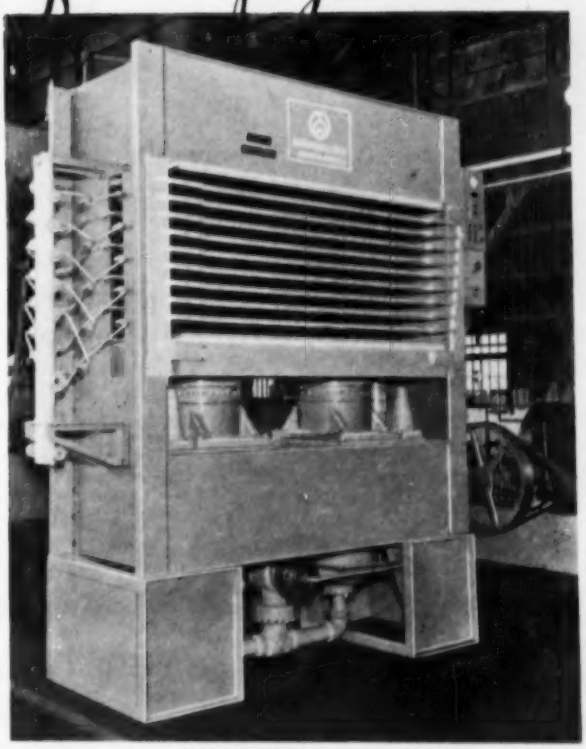
as well as

CANADA
PHILIPPINES
FORMOSA
JAPAN

MEIKI PRESSES

produce the world's finest plywoods

MEIKI



MEIKI CO., LTD.
Nagoya, Japan

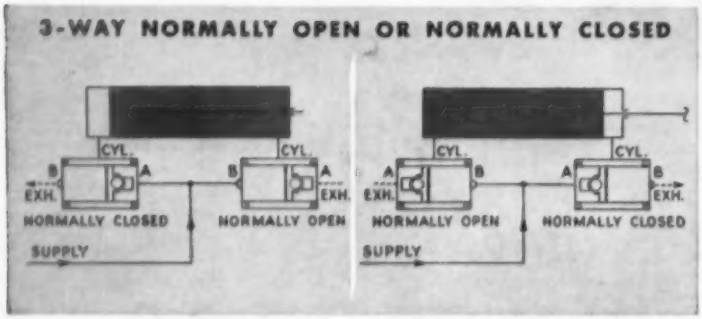
PACIFIC WOOD PRODUCTS CO.
Statler Center - - - - 900 Wilshire Blvd
Los Angeles, 17, California

Cable: Norwood, Los Angeles or Pacificwood, Tokyo

PLYWOOD PRESS EXPORTED TO U.S.A. - 500 U.S. TONS CAPACITY - HYDRAULIC PUMPING UNIT: OILGEAR PRODUCT

Simplified piping

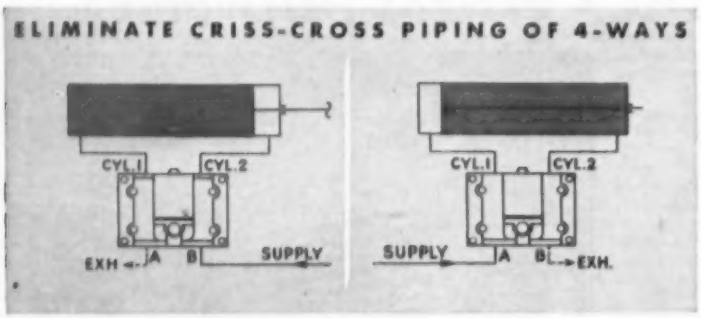
Another Plus Value in NOPAK-MATIC poppet-type air control valves



Simply pipe to proper port . . . no change in valve necessary

Piping supply to Port "A" provides Normally Closed operation — supply to Port "B" Normally Open operation. There are no changes to make in the valve . . . just pipe to the proper port. All 3-Way valves have two cylinder outlet ports for piping convenience.

The exclusive Nopak-matic "Flow-Director" pilot head automatically selects pilot pressure from whichever port is used as inlet. It eliminates purchasing special valves for each application or re-assembling of parts.



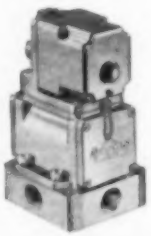
Simply pipe to proper port . . . no change in valve necessary

All Nopak-matic 4-Way valves can be piped with pressure to Port "A" or Port "B". Here again, the "Flow-Director" pilot head automatically selects pilot pressure from the inlet port. Flow through the valve is thus changed to meet the application requirements . . . eliminates criss-cross piping to the cylinder. There are no changes to make in the valve . . . just pipe to the proper port.

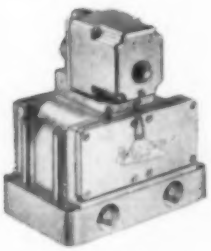
NOPAK-MATIC Plus Value Valves are available in ¼", ⅜", ½" and ¾" pipe sizes, for 2- or 3-Way Normally Open or Normally Closed operation with master (air), single or double solenoid pilot control heads.

300 SERIES
2,- 3-Way
Master Valves

400 SERIES
4-Way
Master Valves

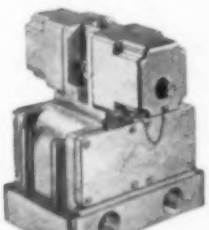


310 SERIES
2-, 3-Way
Single Solenoid
Pilot Operated



410 SERIES
4-Way
Single Solenoid
Pilot Operated

320 SERIES
2-, 3-Way
Double Solenoid
Pilot Operated



420 SERIES
4-Way
Double Solenoid
Pilot Operated

NOPAK-MATIC valves meet all J.I.C. Standards

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Catalog 105 describes in detail all the Nopak-matic Plus Values and gives complete dimensions, installation and parts data. Send for your catalog now. It will be forwarded promptly.

Hardboard, Particleboard & Flakeboard Department

HARDBOARD ASSN. Directors review industry developments at semi-annual meeting in Portland, Ore. where this organization recently launched home improvement program for eleven western states. (L. to R.) Robert D. Pauley, Mgr. Special Products Div., Weyerhaeuser Timber Co., Tacoma, Wash.; Harold A. Miller, Pres. of Forest Fiber Products Co., Forest Grove, Ore.; R. C. Keck, Assn. Counsel; James M. Tisdall, Sales Mgr., Special Products, Ed. Hines Lumber Co., Skokie, Ill.; K. F. Hafner, Vice Pres. Superwood Corp., Duluth; Robert Charles, Public Relations Counsel, Chicago; A. J. Watt, Assn. Vice Pres. and General Merchandise Manager of U. S. Gypsum Co., Chicago; Paul B. Shoemaker, Vice. Pres. in Charge of Sales, Masonite Corp., Chicago; and National Pres. and Board Chairman of OHI, Assn. Pres. Arthur Vander Sys, Gen. Mgr. of Chapman Manufacturing Co., Corvallis; Walt Walling, Mgr. Hardboard Div., Georgia-Pacific Corp., Portland; Donald Linville, Assn. Executive Sect., Chicago.

Three Booklets Issued

• The Forest Products Research Society has issued three new illustrated booklets on Hardboard, Particle Board and Wood Residue Utilization.

Due to increasing interest in these subjects more than 40 papers presented at FPRS sectional and national meetings throughout the U. S. and Canada during the past three years have been compiled. The three 48-page booklets contain 200 illustrations and tables. They are available from the FPRS National Office, Madison 5, Wisconsin.

The booklet on Particle Board includes papers on the principal processes, market potential, uses and experience, economics and testing and evaluating methods. Thirty-four photographs and 40 tables and drawings illustrate the 13 papers.

Gluing, economics, testing and evaluating, and the principal production processes are brought out in the 15 papers in the booklet on Hardboard. The papers are illustrated by eight photographs and 65 drawings and tables.

The Wood Residue Utilization booklet, featuring reports on chips, equipment, economics, moulded products, finger jointers, bark, and sawdust, includes 15 papers that are illustrated by 26 photographs and 24 tables and drawings.

Kaiser Gypsum Appoints Men

• Walter E. Lord, Jr., has been named division manager and Charles E. Watson gypsum products manager respectively, in the Pacific Northwest sales division of Kaiser Gypsum Co., covering Washington, Oregon, Idaho, Western Montana and Alaska.

Kaiser Gypsum's recent acquisition of the Fir-Tex Insulating Products facilities at St. Helens, Ore., and expansion of the company's gypsum building materials production capacities requiring broader market coverage necessitated the appointments.

• Sale of stock in Lane Pacific Particle Board, Inc., Junction City, Ore., got underway in March. Plans for the new plant have been outlined by Mr. McDonald, Columbia Engineering Co., Corvallis, Ore.

Delmar Lynch, head of the Lane Pacific Co., states that prospects for getting the plant operating on schedule are very favorable.

Look for THE LUMBERMAN'S Big Board Issue on May 17

You can't afford to miss the annual review of the hardboard, particle board and flakeboard industries in the May 17 issue of THE LUMBERMAN.

In it you'll find operating reports on the newest plants, together with a complete directory of all plants in the United States. Tables on domestic and world production, new processes and special reviews—you'll have all of these in this special industry review number. Look for it on May 17.

HOBART O. McQUEARY, formerly vice president-sales manager, has been named president of Willamette Fibre & Chip Board, Inc., Sweet Home, Ore., succeeding JOHN TYNER, who joined E. V. Prentice Machinery Co. to head that firm's new wood utilization division.

HOBART McQUEARY has been appointed president and general manager of the Willamette Fibre and Chipboard Co., Sweet Home, Oregon.

FPRS To Discuss Particleboard

• The Northern California Section of the Forest Products Research Society will meet May 2 and 3 in Berkeley, Calif. Theme of the meeting is Particle Board.

Speakers on the program will include L. N. Ericksen, California Forest and Range Experiment Station; Henry Sandstrom, The Diamond Match Co.; Douglas L. Hunt, Western Pine Association; Dr. George Marra, Washington State Institute of Technology; Warren C. Smith, U. S. Plywood Corp.; Dr. J. E. Marian, Forest Products Laboratory, Richmond, Calif.; Wayne C. Lewis, U. S. Forest Products Laboratory; Donald R. Seip, Donald R. Seip Co.; Clark C. Heritage, Consultant, Tacoma, Wash.

MacMillan Profit Down One Million

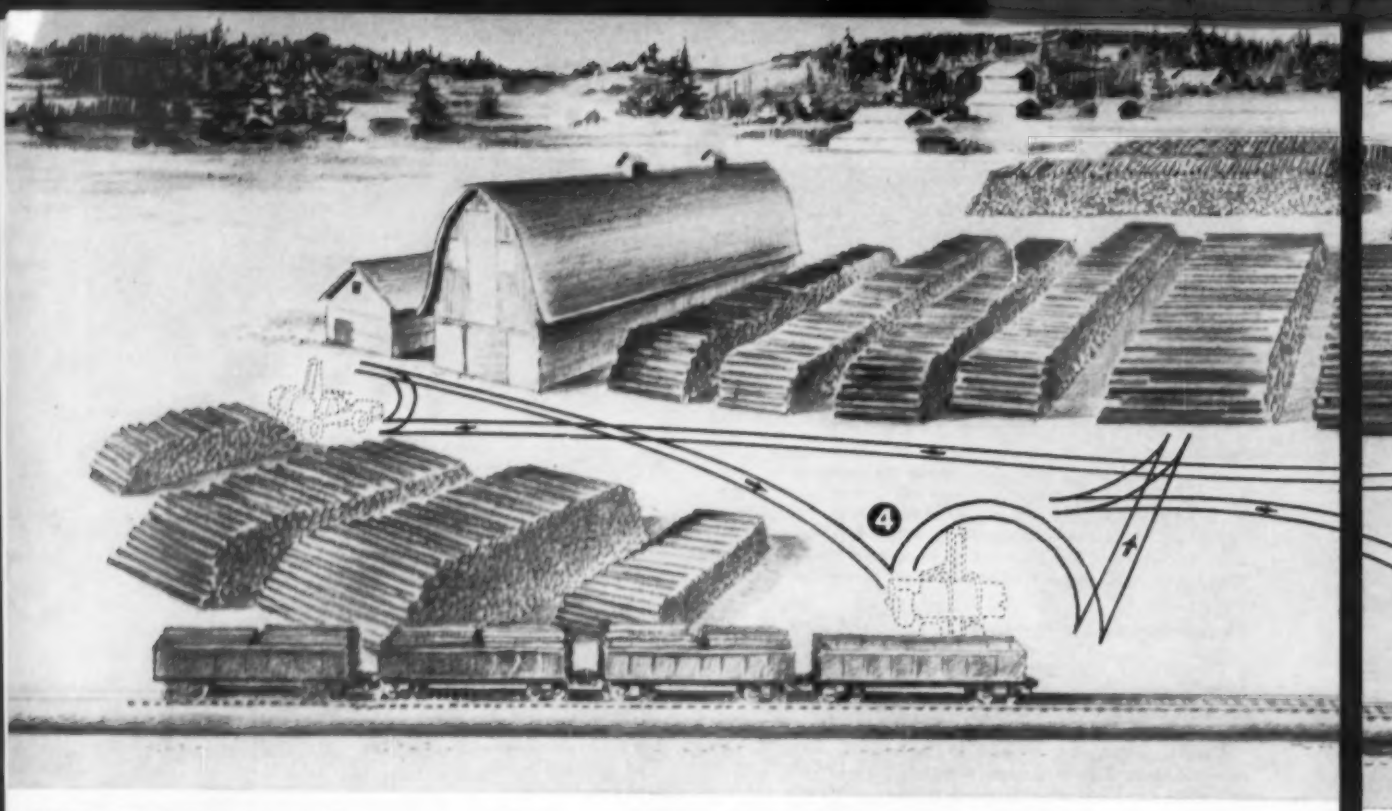
• Net earning of MacMillan & Bloedel Ltd., Vancouver, B. C. for the quarter ended Dec. 31, 1956, were $1,069,937 lower than for the same period of the previous year.

The net income for the period was $3,276,937 and $4,345,993 for the quarter ended Dec. 31, 1955.

The lower earnings were due to the fact that although sales volume was greater, price of all company products except pulp were lower, company officials reported.

Sales and operating revenues for the period were $39,933,889 which compares with $39,245,739 for the same quarter in 1955.

• Oregon's first small sawmill was built near Champoeg in 1836 by Thomas McKay. Ewing Young built another in the Chehalem Valley about the same time.



LETOURNEAU Log Stacker does five jobs

This mill, in northern Idaho, has a daily capacity of 300,000 board feet. To keep pace with this production, a LeTourneau Log Stacker in the unloading and decking area keeps pulp, peelers, and saw logs moving in the proper channels . . . which means that it must do many different jobs in many different areas of the big yard.

JOB STUDY POINTS UP VERSATILITY

The drawing above shows just one cycle of a typical day's activities . . . a cycle repeated with variations for eight operating hours during a one-day job study and analysis made soon after this company bought its LeTourneau Log Stacker. Jobs illustrated are:

❶ Unloads Trucks ❷ Builds Cold Deck ❸ Sorts Logs
❹ Loads or Unloads Rail Cars ❺ Feeds Logs to Mill Pond

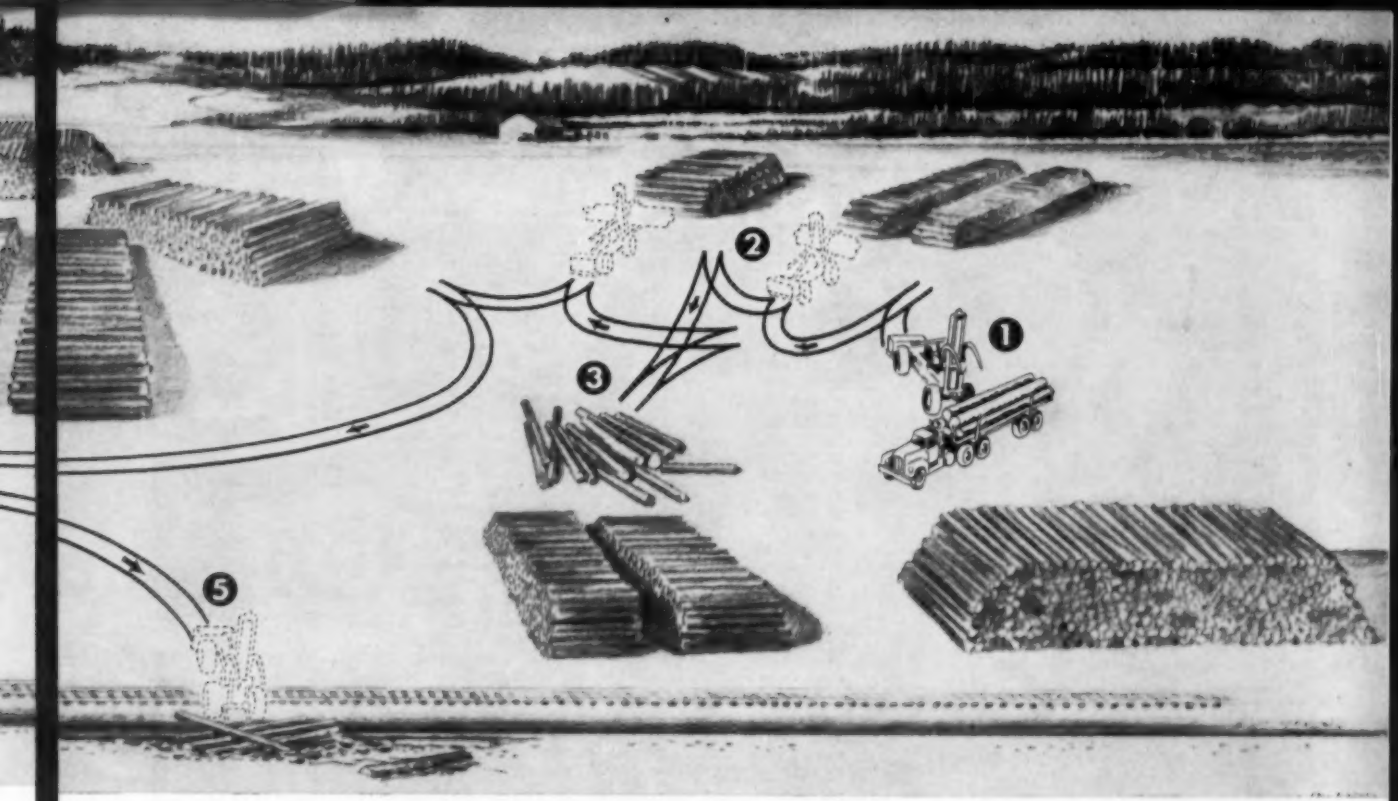
All five jobs are handled by the Stacker and one operator. On the day this study was made, the Stacker unloaded **257,225 board feet** from **63 trucks.** The handling operations, as charted in the yard and tabulated on an engineer's report, show the following totals — Scribner scale as recorded by mill scalers:

	Board Feet
Fed to pond directly from trucks	235,345
Cold decked directly from trucks	21,880
Fed to pond from cold decks	16,160
Handled from deck to deck	11,940
TOTAL BOARD FEET HANDLED IN 8 HOUR OPERATING TIME	285,325

DURING THE PEAK OF THE LOGGING SEASON THE LeTOURNEAU LOG STACKER OPERATED 12 TO 14 HOURS A DAY AND HANDLED AN AVERAGE OF 350,000 BOARD FEET.

UNLOADS TRUCKS

FEEDS LOGS TO POND



in busy Idaho mill yard

DIESEL-ELECTRIC POWER DOES THE JOB

Speed, capacity, and versatility for handling 300,000 board feet per day are made possible by the exclusive LeTourneau System of Electric Power and Control. Here's how it works on the Stacker:

1. Diesel-Electric Power — Constant-speed engine and big electric generators maintain top efficiency all day long, under capacity or light loading.

2. Tractive Power with LeTourneau Electric Wheels — Each wheel a prime mover with its own short-coupled gearing and direct motor drive. All forward and reverse motion, braking, speed, and power controlled by simple swinging-arm rheostat.

3. Every Function Powered — Locally-placed LeTourneau Gearmotors, ready to work on an instant's notice, power the raising and lowering of forks, tusks, boom tilt, and steering. Just touch a switch, and the Stacker becomes a steel-fingered extension of the operator's will.

See the Stacker at Work . . .

Ask your LeTourneau distributor to show you one in action. Write for literature and name of nearest distributor. No obligation, of course.

Since 1929 — R. G. LeTourneau, Inc., has built BIG equipment for 28 years under the same corporate structure. In 1953 LeTourneau sold part of its business, retaining plants in Longview, Texas, and Vicksburg, Miss. Today LeTourneau creates and produces electrically powered and controlled equipment for logging, land clearing, and off-road transportation.

LOADS RAIL CARS

R. G. LeTOURNEAU INC
LOGGING EQUIPMENT DIVISION
2534 So. MacArthur, Longview, Texas

R. G. LeTourneau, Inc.
2544 So. MacArthur, Longview, Texas

Please send Folder describing the Electric Stacker.

NAME_____

COMPANY_____

ADDRESS_____

CITY_____ STATE/PROVINCE_____

L-138

Production of Major Southern Sawmills —1956

Firm Name	Location	Lbr. FT BM
Dierks Forest, Inc., Hot Springs, Ark.		117,569,000
Frost Lumber Industries, Shreveport, La.		85,826,000
E. L. Bruce Co., Memphis, Tenn.		83,330,000
Southern Pine Lumber Co., Diboll, Texas		75,313,710
Crossett Lumber Co., Crossett, Ark.		73,757,000
Kirby Lumber Co., Houston, Texas		57,738,751
Roy O. Martin Lbr. Co. & Associates, Alexandria, La.		57,000,000
Southern Lumber Co., Warren, Ark.		47,672,000
Angelina County Lbr. Co., Kaltys, Texas		46,912,273
William Ritter Lbr. Co., Columbus, Ohio		44,168,384
Fordyce Lumber Co., Fordyce, Ark.		41,600,000
Anderson-Tully Lbr. Co., Memphis, Tenn.		40,575,030
Bradley Lumber Co., Warren, Ark.		40,299,964
Dimension Timber Co., Jamestown, S. C.		36,500,000
Scotch Lumber Co., Fulton, Ala.		34,000,000
Allison Lumber Co., Bellamy, Ala.		33,691,686
W. T. Carter & Bros., Camden, Texas		33,132,265
Tremont Lumber Co., Joyce, La.		32,584,937
Vestal Lbr. & Mfg. Co., Knoxville, Tenn.		32,249,881
Crosby Lbr. & Mfg. Co., Crosby, Miss.		26,599,932
Woodward-Walker Lbr. Co., Taylor, La.		25,550,000
Mobile River Sawmill Co., Mt. Vernon, Ala.		25,063,000
Pat Brown Lbr. Co., High Point, N. C.		24,745,000
Camp Mfg. Co., Franklin, Va.		24,742,365
The Alger-Sullivan Lbr. Corp., Century, Fla.		24,011,378
Ozan Lumber Co., Prescott, Ark.		22,782,951
King Lumber Industries, Canton, Miss.		22,667,116
L. R. Freeman & Sons Lbr. Co., Elizabeth City, N. C.		22,000,000
A. DeWeese Lbr. Co., Philadelphia, Miss.		21,672,289
Whitener Lbr. Co., Newberry, S. C.		21,644,499
Reynolds Lumber Co., Pleasant Hill, La.		20,800,000
Richmond Cedar Works, Norfolk, Va.		20,467,662
Williams & McKeithan Lbr. Co., Lynchburg, Va.		20,461,498
Foster Lumber Co., Fostoria, Texas		20,214,542
Gulf Lumber Co., Mobile, Ala.		20,147,108
Greene Bros. Lbr. Co., Elizabethtown, N. C.		20,134,809
Holly Hill Lumber Co., Holly Hill, S. C.		19,500,000
Chas. Ingram Lbr. Co., Florence, S. C.		19,300,000
Chicago Mill & Lbr. Co., Helena, Ark.		18,790,232
J. A. Bentley Lbr. Co., Zimmerman, La.		18,500,757
Suwannee Lbr. Mfg. Co., Shamrock, Fla.		18,320,000
Sledge Lumber Co., Whiteville, N. C.		18,067,603
Butler Lumber Co., Chase City, Va.		17,860,000
Bate Lumber Co., New Bern, N. C.		17,230,442
R. S. Burruss Lumber Co., Lynchburg, Va.		17,200,000
J. M. Jones Lbr. Co., Natchez, Miss.		17,000,000
Chapman & Dewey Lbr. Co. Memphis, Tenn.		16,752,011
L. D. Kellogg Lbr. Co., Alexandria, La.		16,595,500
Belcher & Son, Bluefield, W. Va.		16,460,899
Gurdon Lumber Co., Gurdon, Ark.		16,420,000
Smithfield Lbr. Co., Smithfield, N. C.		15,973,652
Wax Lumber Co., Woodville, Miss.		15,024,662
J. O. Bennett Lbr. Co., Piedmont, Ala.		15,000,000
Gennett Lumber Co., Asheville, N. C.		15,000,000
Clancy Lumber Co., Grayson, Ala.		14,805,000
Flack-Jones Lbr. Co., Ridgeville, S. C.		14,436,000
W. S. Fox & Sons, Pine Bluff, Ark.		14,401,291
J. L. Williams & Sons, Sheridan, Ark.		14,272,512
Urbana Lumber Co., Urbana, Ark.		14,243,733
Nickey Bros., Memphis, Tenn.		14,242,127
Springhill Lumber Co., Springhill, La.		14,000,000
T. R. Miller Mill Co., Brewton, Ala.		13,980,190
J. P. Hamer Lumber Co., Kenova, W. Va.		13,966,933
J. Walter Wright Lbr. Co., Bristol, Tenn.		13,800,000
Williams Lumber Co., Rocky Mount, N. C.		13,675,000
Seagrove Lumber Co., Seagrove, N. C.		13,580,931
Anderson Mfg. Co., Tenaha, Texas		13,200,000
Suwannee Longleaf Mfg. Co., Fargo, Ga.		13,000,000
Spaulding Lbr. Co., Chase City, Va.		13,000,000
La. Long Leaf Lbr. Co., Fisher, La.		13,000,000
Marshall Lumber Co., Marion, N. C.		12,784,372
Sterling Lbr. & Supply Co., Goodwater, Ala.		12,712,819
O. L. Payne, Wells, Texas		12,658,898
Corinth Planing Mill Co., Corinth, Miss.		12,500,000
Perry Lumber Co., Selma, N. C.		12,100,000
Farris Hardwood Lbr. Co., Nashville, Tenn.		12,000,000

Firm Name	Location	Lbr. FT BM
Clemons Bros., Amite, La.		12,000,000
Reimers-Schneider Co., Hammond, La.		11,753,372
Ellijay Lbr. Co., Blue Ridge, Ga.		11,707,000
Dargan Lbr. Mfg. Co., Conway, S. C.		11,250,000
Alexander Bros. Lbr. Co., Columbus, Ga.		11,160,928
Cogle Lumber Co., Thomasville, Ala.		11,000,000
Bond Bros., Louisville, Ky.		11,000,000
Woods Lumber Co., Memphis, Tenn.		10,970,816
Dacus Lumber Co., West Memphis, Tenn.		10,909,578
H. D. Foote Lumber Co., Alexandria, La.		10,882,720
Bellgrade Lumber Co., Memphis, Tenn.		10,832,086
Ely-Thomas Lbr. Co., Camden-on-Gauley, W. Va.		10,651,073
Marion Lumber Co., Marion, S. C.		10,500,000
J. A. Sartain Lbr. Co., Newton, Texas		10,500,000
Louisiana Delta Corp., Trout, La.		10,287,430
Texla Lumber Co., Mauriceville, Texas		10,242,479
D. V. Partridge Lbr. Co., Winona, Miss.		10,000,000
Fuller Lumber Co., Lewisville, Ark.		10,000,000
Melvin Lumber Co., Melvin, Ark.		10,000,000
Scott Lumber Co., Henderson, Ky.		10,000,000
Georgia-Pacific Corp., Dumas, Ark.		9,875,060
Cary Lumber Co., Morrisville, N. C.		9,830,000
Mullins Lumber Co., Mullins, S. C.		9,818,223
Cherry Riv. Boom & Lbr. Co., Richwood, W. Va.		9,740,100
Union Pt. Lbr. Co., Union Point, Ga.		9,680,000
W. T. Vick Lbr. Co., Hamilton, Ala.		9,707,881
W. A. Ranson Lbr. Co., Harahan, La.		9,528,074
Hood Lumber Co., Hermannville, Miss.		9,503,874
Lumber River Mfg. Co., Lumberton, N. C.		9,420,971
Ashepoo River Lbr. Co., Ashepoo, S. C.		9,319,865
Price Paschal Lbr. Co., Brandon, Miss.		9,237,663
W. E. Parks Lbr. Co., Newellton, La.		9,214,711
Sabine Lbr. Co., Zwolle, La.		9,195,598
Sullivan Lumber Co., Preston, Ga.		9,087,209
Nacogdoches County Lbr. Co., Nacogdoches, Texas		9,000,000
Graydon Anthony Lbr. Co., Hope, Ark.		9,000,000
Reynolds & Manley, Savannah, Ga.		8,926,838
C. L. Gray Lbr. Co., Meridian, Miss.		8,918,481
Kellogg Lumber Co., Monroe, La.		8,525,820
Leggett Lbr. Co., Livingston, Texas		8,500,000
Conasauga River Lbr. Co., Conasauga, Tenn.		8,494,000
Neal Lbr. & Mfg. Co., Blountstown, Fla.		8,490,110
Christian Lbr. Co., Monticello, Ky.		8,200,000
Olon Belcher Lbr. Co., Brent, Ala.		8,107,839
Frieberg Mahogany Co., Cincinnati, Ohio		8,054,737
Boettcher Lbr. Co., Huntsville, Texas		8,037,935
Washington Lumber Co., Bowling Green, Va.		8,000,000
R. G. Hancock, Bonlee, N. C.		8,000,000
Council Wood Products, Orangeburg, S. C.		8,000,000
Molpus-King Lbr. Co., Philadelphia, Miss.		8,000,000
Wrightsville Lbr. Co., Wrightsville, Ga.		8,000,000
Davis Bros. Lbr. Co., Ansley, La.		7,864,803
Harless Lbr. Co., Lake Charles, La.		7,689,000
Lakeside Lumber Co., Chatham, La.		7,656,565
J. C. Allen Lbr. & Mfg. Co., Tchula, Miss.		7,636,767
J. F. Browning Lbr. Co., Ricebore, Ga.		7,500,000
R. F. Learned & Son, Natchez, Miss.		7,400,000
Roper Bros. Lbr. Co., Petersburg, Va.		7,362,100
C. M. Tucker Lbr. Corp., Pageland, S. C.		7,297,312
Cathey-Ward Lbr. Co., Montgomery, Ala.		7,239,381
Santee River Hardwood Co., Saint Matthews, S. C.		7,080,000
C. Arnold & Sons, Cullman, Ala.		7,012,275
Peterman Lumber Co., Peterman, Ala.		7,002,500
Timber Lbr. Corp., Conroe, Texas		7,000,560
Georgia-Pacific Corp., Fairfax, S. C.		7,000,000
Willis Lumber Co., Bainbridge, Ga.		7,000,000
Korn Industries, Inc., Sumter, S. C.		7,000,000
Tunica Hardwood Co., Tunica, La.		7,000,000
Lexington Lbr. Co., Orangeburg, S. C.		6,977,581
Lightsey Bros., Miley, S. C.		6,819,228
Brooks-Jessup Lbr. Co., Eastman, Ga.		6,700,000
Farris Lumber Co., Morton, Miss.		6,694,484
McGehee Lbr. Co., Natchez, Miss.		6,566,508
Texoak Flooring Co., Crockett, Texas		6,500,000
Faust Band Sawmill, West Helena, Ark.		6,500,000
Wallin Lumber Co., Columbus, Miss.		6,300,000

SMOOTH OPERATION

EASY-TO-MANEUVER YALE TRUCK MAKES MAXIMUM USE OF BOXCAR SPACE

Notice how this Yale Gas Truck moves large quantities of plywood directly into the boxcar. Inside the freight-car, the truck maneuvers easily and spots loads accurately in high, neat stacks for full use of boxcar space.

Maximum ease of operation is essential in this or any other type of loading operation. That's why all Yale Gas Trucks with capacities of 2,000 to 10,000 lbs. now include premium engineering features to make the driver's job not only easier but safer, too. For example, lowered cowl gives the operator more visibility, provides protection he needs...extra-capacity hydraulic brakes within the wheels provide sure, smooth stops.

And, Yale Gas Trucks with fully automatic Torque Transmission supply instant power for fast starts, high-speed lifting and grade climbing...eliminate the need for gear shifting or clutching. Fluid Coupling or standard transmission are also available. For full facts, send coupon today.

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INDUSTRIAL LIFT TRUCKS AND HOISTS

Gasoline, Electric & LP-Gas Industrial Lift Trucks • Worksavers Warehousers • Hand Trucks • Hand and Electric Hoists

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The YALE & TOWNE Manufacturing Co., Dept. A-1224 Roosevelt Boulevard, Philadelphia 15, Pa.

Please send me the new fact-filled, 24-page booklet No. 5101D on Yale Gas Trucks.

Your Name_____

Firm Name_____

Address_____

City_____ Zone____ State_____

In Canada: write The Yale & Towne Manufacturing Co. St. Catharines, Ontario, Canada

Modernize Your Mill Operation with GUNDERSON BROS.

Production Boosters!

Gunderson semi-portable sawmills and gang mills give you the same efficient, profitable operation as big mills. Gunderson all-steel sawmill equipment is designed for today's conditions —saves time, labor and timber waste . . . speeds up production, lowers operating cost.

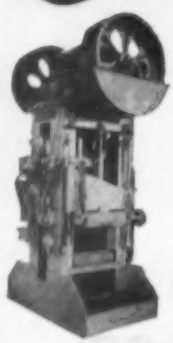
SEMI-PORTABLE GANG SAW

Goes to The Timber

ON WHEELS

All Steel, Long Life, Big Capacity

Move fast to new timber stands . . . level up trailer frame with timbers and start cutting . . . no special foundation needed. Big Mills: Keep small logs out of your big mills . . . save trucking costs with a Gunderson Semi-Portable Gang Saw!

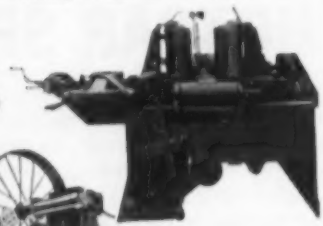


as a Stationary
GANG SAW

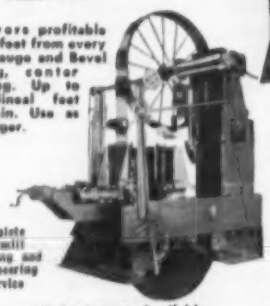
- Accurate; rugged; saws logs or cants. Cuts 8' logs without extra attachment.
- Variable hydraulic feed works . . . speed 8' to 30' per minute.
- Special attachment available for cutting 2 logs at one time.

Cost-Cutting Lumber Salvaging

CIRCULAR RESAW



Recovers profitable board feet from every log. Gauge and Beval Sawing, center splitting. Up to 250 lineal feet per min. Use as an Edger.



Complete Sawmill Planning and Engineering Service

Vertical BAND RESAW

- Accurate Gauge & Beval sawing . . . Center splitting.
- Instant Setting.
- All-steel Pressure Bar Feed Table and Feed Rolls, or
- with Tilt Table & Quadrant Set Works.

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Write for Illustrated Literature and Complete Information.

GUNDERSON BROS. ENGINEERING CORPORATION
Steel Fabricating Division
4700 N. W. Front Avenue
Portland 8, Oregon

Firm Name	Location	Lbr. FT BM
Beatrice Lumber Co.	Beatrice, Ala.	6,246,904
Bailey Lumber Co.	Laurel, Miss.	6,151,048
Cordele Sash, Door & Lbr. Co.	Cordele, Ga.	6,000,000
McGraw-Curran Lbr. Co.	Yazoo City, Miss.	6,000,000
Roberts Lumber Co.	Roberta, Ga.	6,000,000
Watkins Lumber Co.	Albany, Ga.	5,998,400
R. I. Mitchell & Sons	Spring Hope, N. C.	5,644,365
Layfield & Sons	Providence Forge, Va.	5,835,533
Martin Lumber Co.	Winnsboro, Texas	5,602,769
Gloucester Lbr. Co.	Resman, N. C.	5,467,724
H. M. Walker Lbr. Co.	Battleboro, N. C.	5,358,966
Geo. S. Strothers Lbr. Co.	Athens, Ga.	5,351,584
Mississippi Valley Hardwood Co.	Jonesville, La.	5,342,497
Beech Creek Lbr. Co.	Warren, Texas	5,255,334
Rush Lumber Co.	Hawkinsville, Ga.	5,151,004
Darnell Lumber Co.	Carthage, Texas	5,146,421
Intermountain C. & Lbr. Co.	Elkins, W. Va.	5,071,554
Bradley Lbr. Co.	Aberdeen, Miss.	5,063,884
C. H. Proetz Lbr. Co.	Texarkana, Texas	5,051,000
Stimson Lbr. Co.	Battleboro, N. C.	5,023,641
Hines Bros. Lbr. Co.	Kinston, N. C.	5,000,000
Freeman Lumber Co.	Ahoskie, N. C.	5,000,000
J. P. Haynes Lbr. Co.	Canton, Ga.	4,901,046
Walton Lumber Co.	Richmond, Va.	4,779,297
Nettles Lumber Co.	Arlington, Ala.	4,730,000
Casey Lumber Co.	Rocky Point, N. C.	4,646,000
A. P. deMange Lbr. Co.	Madison, Ark.	4,500,000
C. P. Chaney Sawmill	DeWitt, Ark.	4,500,000
Sentell Lbr. Co.	Lineville, Ala.	4,283,789
St. Joe Paper Co.	Albany, Ga.	4,252,369
Bennett Lbr. Co.	Greenville, Ala.	4,200,000
Rogers & Evans Lbr. Co.	Converse, La.	4,139,041
Sinclair Lbr. Co.	Laurinburg, N. C.	4,104,203
Benson Lumber Co.	Pickens, W. Va.	4,000,000
Shiplett Lbr. Co.	Vidalia, Ga.	4,000,000
C. P. Bodine Lbr. Co.	Memphis, Tenn.	3,918,861
R. P. Gray	Signpine, Va.	3,625,000
Santa Rosa Lbr. Co.	Milton, Fla.	3,600,000
Stowell-MacGregor Corp.	Albany, Ga.	3,557,400
M. L. McLeod	Ravenel, S. C.	3,500,000
Buna Lumber Co.	Buna, Texas	3,474,858
Arkansas Products	Harrison, Ark.	3,300,474
Higgins Bros.	Waverly, Va.	3,285,244
R. B. Jordan, Jr.	Mount Gilead, N. C.	3,285,000
Bates & Pearcy Lbr. Co.	Hot Springs, Ark.	3,250,000
Columbus Lbr. & Supply Co.	Columbus, Ga.	3,000,000
Hill-Inzer Lbr. Co.	Amory, Miss.	2,751,000
D. S. Parrish	Richmond, Va.	2,700,000
Harrelsville Lbr. Co.	Ahoskie, N. C.	2,600,000
Webb Lumber Co.	Armiston, Ala.	2,500,000
D. L. Stone Lbr. Co.	Waynesboro, Ga.	2,500,000
H. E. Savage	Walterboro, S. C.	2,500,000
Cook & McGowin Lbr. Co.	Andalusia, Ala.	2,500,000
H. H. Brown Lbr. Co.	Strother, S. C.	2,450,000
E. M. Parham Lbr. Co.	Stony Creek, Va.	2,400,000
Chicamauga Cedar Co.	Stevenson, Ala.	2,375,000
St. Joe Lbr. & Export Co.	Port St. Joe, Fla.	2,344,678
Richardson Bros.	Kents Store, Va.	2,344,605
Ward-Rue Lumber Co.	Culpepper, Va.	2,323,000
S. A. Luck & Son	Ashland, Va.	2,100,000
Magazine Lbr. Co.	Bogalusa, La.	2,000,000
J. W. Jeffries Lbr. Co.	Shreveport, La.	1,999,694
N. A. Shaner Lbr. Co.	Cedar Bluff, Ala.	1,866,783
Goodwin Bros. Lbr. Co.	Mine Run, Va.	1,800,000
Wilson Lumber Co.	Hot Springs, Ala.	1,750,000
Jeffreys, Spaulding Mfg. Co.	Chase City, Va.	1,633,292
E. B. Chancey Lbr. Co.	Union Springs, Ala.	1,577,829
Southern Pine Lbr. Mills	Elizabethtown, N. C.	1,567,000
Samuel E. Peters	Springfield, W. Va.	1,500,000
Mullenax Lbr. Co.	Blue Grass, Va.	1,500,000
R. H. Edge & Son	Fayetteville, N. C.	1,500,000
M. D. Kitchens Lbr. Co.	Utica, Miss.	1,500,000
La. Cypress Lbr. Co.	Ponchatoula, La.	1,500,000

NOTE—In some instances figures include cut of more than one mill.

MAJOR LAKE STATES AND NORTHEAST SAWMILLS

Firm Name	Location	Lbr. FT BM
Conner Land & Lbr. Co.	Laona, Wis.	23,604,368
Brown Co., Lbr. Dept.	Berlin, N. H.	18,400,000
Homestake Mining Co.	Spearfish, S. D.	18,000,000
Grafton Lbr. Co.	Bethel, Me.	16,000,000*
Northern Lumber Co.	Poland, N. Y.	14,263,343
W. H. Champlin	Rochester, N. H.	14,100,000
Kimberly-Clark	Neenah, Wis.	13,861,003
Abbott-Fox Lbr. Co.	Iron Mt., Mich.	13,467,791
Tigerton Lumber Co.	Tigerton, Wis.	13,000,000
Goodman Lumber Co.	Goodman, Wis.	11,100,000

Firm Name	Location	Lbr. FT BM
White River Tbr. Co.,	Park Falls, Wis.	10,734,000
Thureson Lumber Co.,	Howell, Mich.	10,500,000
Great Eastern Lbr. Corp.,	North Creek, N. Y.	10,000,000
Icabod T. Williams & Sons,	Carteret, N. J.	8,000,000
Yawkey-Bissell Hardwood Fl. Co.,	White Lake, Wis.	7,225,000
Cadillac Soo Lbr. Co.,	Sault St. Marie, Mich.	6,981,185
C. M. Christensen Co.,	Phelps, Wis.	6,917,200
Erickson Hardwoods,	Onalaska, Wis.	6,500,000
Fisher & Young,	Titusville, Pa.	5,845,845
C. B. Norton & Son,	Great Valley, N. Y.	5,200,000
Cotton-Hanlon,	Odessa, N. Y.	5,110,173
Oval Wood Dish Corp.,	Tupper Lake, N. Y.	3,491,227
Phillips Fl. & Lbr. Co.,	Phillips, Wis.	3,199,000
Knoke Lbr. Co.,	Appleton, Wis.	3,067,124
The John Morgan Lbr. Co.,	Pittsfield, Pa.	3,000,000
Blout Lumber Co.,	Lacoma, N. Y.	2,750,000
Michigan Pole & Tie Co.,	Newberry, Mich.	2,628,491
J. C. Campbell Co.,	Duluth, Minn.	2,600,000
N. T. Fox Co., Inc.,	Portland, Me.	2,512,000
A. Mason & Sons, Inc.,	Peru, N. Y.	2,500,000
The Green Glen, Inc.,	Dubois, Pa.	2,155,086
Beecher Falls Mfg. Co.,	Beecher Falls, Vt.	2,000,000
Ward Lumber Co.,	Jay, N. Y.	2,000,000
H. C. Peterson Lbr. Co.,	Watersmeet, Mich.	2,000,000

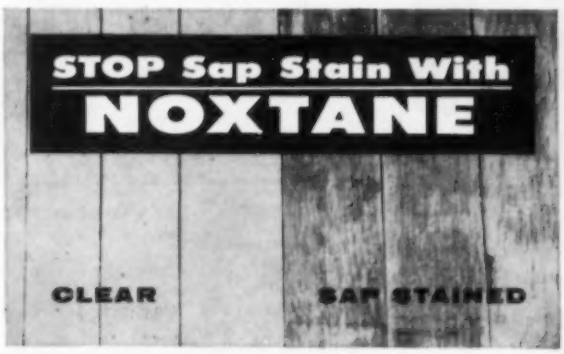
*Two mills.

MAJOR ALASKA SAWMILLS

Firm Name	Location	Lbr. FT BM
Ketchikan Spruce Mills,	Ketchikan, Alaska	20,160,524
Columbia Lbr. Co.,	Juneau, Alaska	12,500,000
Wrangell Lumber Co.,	Wrangell, Alaska	11,671,934

MAJOR EASTERN CANADIAN SAWMILLS

Firm Name	Location	Lbr. FT BM
Price Bros. & Co., Ltd.,	Quebec, P. Q.	53,000,000
J. J. McFadden Lbr. Co.,	Blind River, Ont.	40,900,532
George Gordon & Co., Ltd.,	Cache Bay, Ont.	12,841,698
The Pas Lumber Co.,	The Pas, Man.	10,260,681



SAVE UP TO $150 PER MBM! Prevent sap stain with NOXTANE at a cost of only a few cents per thousand board feet.

NOXTANE dip or spray is a *complete* formulation—*no mixing!* Keeps lumber bright, clear, stain-free. Easy to use—can't harm hands. Dissolves rapidly . . . no arsenic or mercury . . . non-irritating and dustless . . . resists leaching from rain . . . controls surface mold and decay organisms. Conveniently packaged in 10 lb. bags. Just mix one bag to 100 gallons of water.

NOXTANE can add thousands of dollars yearly to your profits.

Write For Brochure . . . that tells how to prevent degrading easily, economically.

WOOD TREATING CHEMICALS CO.

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1896 Dennison Ave. • Oakland 6, Calif.

SPEAR & JACKSON

Circular SAWS

If you are interested in saws that cut two to three times as much lumber—sorry we can't help you!

But if you are interested in cutting well manufactured lumber with trouble-free saws—that's where we come in.

By locating our factory at Eugene, Oregon, close to the center of the lumber industry, we can offer direct factory - to - mill service in custom - made saws—good saws made on the Pacific Coast.

SPEAR & JACKSON

EUGENE, OREGON

Band, Gang, Circular Saws, Teeth and Holders

"The Saw Without a Flaw"

Montana Grain Door

(*Continued from page* 39)

the flow through the plant can be traced on the accompanying drawing. Note that this is strictly a "hot" operation, in that doors are fed directly into cars just as soon as they are completed.

Exact saw spacing on the Stetson-Ross Model T33A selective wheel trimmer allows maximum utilization of boards of any length. The trimmer has a lineshaft drive which serves each motor; power is furnished by a 75-hp. electric motor. Spacing is figured for the best combination of actual stock lengths required, with little or no waste. Stock lengths required are 59, 71 and 83 inches.

Exact saw spacings from the zero saw are listed here. Note that stock lengths have been reduced slightly from the nominal lengths, for better utilization.

3' - 35"	9' - 106-3/16"	15' - 177-3/8"
4' - 47"	10' - 118-3/16"	16' - 189-3/8"
5' - 59"	11' - 130-3/16"	17' - 201-3/8"
6' - 71"	12' - 142-3/16"	18' - 213-3/8"
7' - 83"	13' - 154-3/16"	19' - 225-3/8"
8' - 94-3/16"	14' - 166-3/16"	20' - 237-3/8"

(Spacings are measured from inside of zero saw to inside of all other saws.)

Realistic planning and alert engineering are readily apparent in the design and operation of the live, reversible floor chains and the adjacent lay-up section. One of the J. Neils men explains, "The floor chains are reversible and made in two sections. Carrier loads of cut lumber can be put on or taken off from each section. This provides flexibility for the nailing department as well as for the cutting and sorting department. Either department could be operated independently of the other, but the main reason for the chains to be able to balance the stock at the lay-up table.

"At times too much of one length may be produced on the trimmer and at other times there may be shortage of that same length. Normal operation is straight through, but the floor chains make it possible to supplement with previously cut material."

The J. Neils Lumber Co. worked with Stetson-Ross Machine Co. of Seattle in designing this plant.

Grain Doors Consume Much Lumber

Grain doors constitute an important thought generally overlooked segment of the overall lumber industry picture. Figures provided by the Forest Products Laboratory show that in 1948 *the following volumes (to the nearest million bd. ft.) of different species of lumber went into grain doors:*

Douglas-fir	31 million bd. ft.
Southern pine	20 million bd. ft.
Eastern hemlock	15 million bd. ft.
Western hemlock	9 million bd. ft.
All other softwoods	2 million bd. ft.
All hardwoods	2 million bd. ft.
Total	79 million bd. ft.

As long ago as the 1920's, *the Madison laboratory studied the possibilities for utilization of short length softwoods and gave some attention to grain doors. The lab reports that low grade lumber is adequate, providing it is reasonably strong. A grain door should be grain tight, thus requiring staggered joints between layers of boards.*

Ponderosa Pine Woodwork Elects Officers

Harold J. Ford, general sales manager, Tarter, Webster and Johnson, San Francisco, Calif., was elected president of Ponderosa Pine Woodwork at the annual meeting of the association held recently in Chicago. Ponderosa Pine Woodwork is an association of lumber producers and manufacturers of wood windows, panel doors, and kitchen cabinets.

He succeeds James D. Rowland, vice president, Andersen Corp., Bayport, Minnesota. Other officers elected were: E. V. Donahue, Wabash Screen Door Co., Chicago, vice president; James F. Shiely, Winton Lumber Sales Co., Minneapolis, treasurer, and C. R. Hunsicker, Curtis Companies, Inc., Clinton, Iowa, secretary.

R. H. Morris continues as general manager of the association with headquarters in Chicago, with Robert H. Herbst as assistant manager. Phil Creden, director of public relations, Edward Hines Lumber Co., Chicago, was again named chairman of the advertising committee.

Their Wheland Carriage with Air Setworks and Air Dogs is "a pleasure to operate" according to Breece-White Mfg., Co., Eudora, Arkansas.

MODERN WHELAND SAWMILL EQUIPMENT
HALTS SHRINKING PROFITS!

"Making several thousand more feet of lumber per day . . . doing it with several men less."
—Robert G. White
Breece-White Mfg. Co.

More and more operators are finding . . . as Breece-White has found . . . the best way to halt shrinking profits is to install modern Wheland Sawmill Equipment! Produces better lumber faster with fewer men. Electrically driven, air operated. Complete installations or just the pieces you need to improve efficiency in your mill. Pays for itself from extra profits in just a few months. Why not investigate?

BULLETINS ON REQUEST

WHELAND
THE WHELAND COMPANY
CHATTANOOGA, TENNESSEE—PHONE AMherst 5-3181
MANUFACTURERS OF COMPLETE SAWMILLS AND AUXILIARY MACHINERY

Job Training Program

(*Continued from page* 42)

these yearly schools a meeting is held with the Superintendent of Schools for the Gem County District, appointed Union representatives of the Blue Mountain District, representatives for the Vocational Educational Department of the State of Idaho, and the training Director for Boise Payette Lumber Co.

At this meeting discussion is held on the various sawmilling courses to be offered for the current year. In this manner all concerned parties have an opportunity to outline the best possible and well-rounded curriculum for the current year.

Following this meeting the classes being offered are posted at the mill. Boise Payette Lumber Co. employees then make application for the classes with the training director at which time the employees' aptitude may again be reviewed by both parties.

Following application for courses the applicants are assigned to their prescribed locations for training. Depending on the courses, they will either start with classroom training and complete with on-the-job type training or start immediately with the job type training. All classes are held on Saturdays, when the plant is down, and trainees are attending on their own time. Classes are held each Saturday for three hours until a total of 30 to 40 hours are completed.

IN THE JOB TYPE TRAINING the employee is schooled at the immediate job for which the course is being held. As an example, during 1956 two headrigs and two edgers were operating while the setting, sawing, edging and grading for sawyers classes were conducted. Classes actually cut and handled lumber.

Other classes during the year were log scaling, rough lumber grading, surfaced lumber grading, select lumber grading, shop lumber grading, car checking and tallying, crane and monorail operation, lift truck and carrier operation, millwrighting, saw filing, electrical, blue print reading, planer set-up, power house operating and trade mathematics.

Instructors and facilities were furnished by Boise Payette Lumber Co. The salaries of the instructors were paid for by the Gem County School District through the Vocational Education Department for the State of Idaho. Well over a hundred employees completed their courses and received a certificate sponsored by Boise Payette Lumber Co. All employees receiving certificates are placed on file in the training department for later references as jobs develop in the plant. All jobs, other than enfree jobs, are posted in the company blackboard. Applicants for the posted jobs are considered at a joint union and company meeting.

The union recognizes employees that have attended the vocational schools over and above those employees that have mere seniority as their claim to the posted job opening. Boise Payette Lumber Company's experience has proven that a double-barrelled personnel program is effective and one to the liking of both management and employees.

Hardwood Men Name Leaders

• E. R. Thomas, St. Louis, Mo., was elected president of the Southern Hardwood Producers, Inc., at the closing of a two-day convention in March. He succeeds Henry W. Jones, Memphis, Tenn., elevated to chairman of the board.

Other officers chosen were E. L. Douglass, Augusta, Ga., vice-president, and L. J. Heatherly, Memphis, secretary-manager.

Simpson Employes Honored

• Ninety employees who have worked a total of more than 2,900 years for Simpson Logging Co. at Shelton and McCleary, Wash., were honored at the company's first annual Quarter Century Awards dinner on March 29. C. H. Bacon, Jr., vice president and general manager, presented an engraved watch and service award emblem to employees who had worked 25 years or more with Simpson.

BLUE BABE Products
NORTHWEST MARINE IRON WORKS PORTLAND OREGON

BLUE BABE HYDRAULIC VENEER CLIPPER

A pressure arm and foot, hydraulically operated, is made on the pantograph principle which assures even pressure the entire width of the stack. Movable end and pressure plate hydraulically actuated. All mechanical movements controlled by one operator from console.

See your dealer or write direct for additional information.

NORTHWEST MARINE IRON WORKS
DESIGNERS OF SAWMILL AND LOGGING EQUIPMENT
2516 N. W. 29th AVE. *Industrial Division* PORTLAND, OREGON

New Barking & Chipping Plant

(*Continued from page 55*)

ern's over-all operations, of which the barking and chipping plant are a unit, are among the largest in the Northwest, with annual lumber production ranging upwards of 175,000,000 feet.

A total of seven chippers will handle the operation. To the original installation of one chipper in the sawmill and two in the plywood plant have been added one in the barker plant, a horizontal-type in the sawmill (both of which started operation in January), and another in the plywood plant which has been in production since the fall. The seventh—in the sawmill—will start up in the spring.

Prior to installation of the barker facilities and additional chipping equipment, something less than one-half a unit of chips was a by-product from each thousand feet of lumber produced. Using barked logs, chip yield is increased to about three-quarters of a unit per thousand feet of lumber.

Logs, mostly brought in from Vancouver Island camps in flat rafts or bundle rafts and towed up the Fraser by the company's own towboat fleet, are fed to the barking plant by a conventional incline haul. There are two barkers, both Nicholsons, one a 60-inch unit and the other 50-inch, the latter operating primarily on saw logs, the barked logs being passed back to the river and sent on to the mill downstream. From the 60-inch barker high grade stock goes onto the deck for peelers. The end cuts, "lily pads" and other rejects are severed by a steam splitter supplied by Sumner Iron Works and then dropped to a Sumner three-knife chipper.

BARKED LOGS ARE CUT to length by a 108-inch Sumner swing saw with Spear & Jackson blade, cutting in the same slot with a Sumner-built chain saw setup embodying a Spear & Jackson chain saw with eight foot bar. There are pop-up stops in the log conveyor to provide for reduction of the logs to plywood lengths.

Chips are blown upward from the Sumner three-knife chipper into a cyclone and discharged direct to a small surge bin. From there the chips are taken by Link-Belt vane-type feeder and passed over a Dillon vibrating screen, then dropped to a Rader Pneumatic & Engineering Co. feeder and blown out to the chip storage pile in the open.

After being cut to length the barked logs are returned to the water. The current of the Fraser River carries them to the sawmill or plywood plant. Refuse from the barking operation is collected in refuse conveyors in the basement of the barker building and sent through Sumner knife hogs before being dumped into open storage.

Chips are reclaimed from the storage pile by bulldozer and blown to barges by the Rader Pneumatic system. Hog fuel is reclaimed by bulldozer and taken by conveyor belt to the boiler plant.

In other modernization steps, installation of two riderless carriages and a new band mill in the sawmill for more efficient initial milling of logs and cleaner working conditions was completed last fall. Other modifications include a new horizontal resaw, a new gang saw (replacement), electrification of a steam-driven gang saw, and general revision of the flow of material in the sawmill.

Mills Increase Chip Usage

Pulp and paper mills of Crown Zellerbach Canada Limited at Ocean Falls and Elk Falls used 132,217 *units of wood chips in* 1956, *which represented a recovery of* 52,986,800 *board feet of timber which would otherwise have been lost.*

This chip usage was 28.3 *per cent of the total wood supply of its two primary pulp and paper mills. The chips were recovered from sawmill residue wood.*

In addition to chip recovery, the company's timber department also increased its utilization of wood supply through pre-logging and re-logging activities. Use for the first time in 1956 *of high lead units in pre-logging, instead of tractors, helped increase the amount of small timber recovered.*

The recovery of small logs for pulpwood in 1956 *by pre-logging, re-logging and other conventional methods amounted to* 15,000,000 *board feet, all of which went to Elk Falls. This represented* 23.5 *per cent of the total wood supply for the mill.*

Start-up of the new kraft pulp mill at Elk Falls during 1956 *provided the company with a new major outlet for utilization of chips, in addition to those already being used at Ocean Falls.*

Modernization at the company's sawmill and plywood mill at Fraser Mills will provide for even greater utilization of residues in the manufacture of additional chips. A new barker plant, and four new chippers will double monthly chip production at Fraser Mills from 5,800 *units to more than* 10,000 *units. This extra production is earmarked for Ocean Falls and Elk Falls.*

The new Elk Falls sawmill will further augment chip manufacture with its capacity of 2,000 *units a month.*

Oil Fog lubrication saves money

NORGREN oil fog systems, stocked by POWER TRANSMISSION PRODUCTS, provides infinitely small oil particles which coat moving parts of all machinery. It lubricates with maximum efficiency; no drippage or waste. Lubricants maintain the most intricate bearings, gears, chains and machine parts at highest operating levels.

POWER TRANSMISSION PRODUCTS provides a lubricator for all requirements and engineers for every question. Call PTP for *Fast* service.

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• The biggest market for the popular western red cedar siding for home construction is Ohio, followed closely by New York, Michigan, New Jersey, Minnesota and Massachusetts. This is interesting to Oregonians and Washingtonians whose lumber mills produce most of the western red cedar lumber cut in this country.

1. All steel, air controlled, log stop and loader. 2. Semi-automatic air-operated infeed carriage with fully integrated controls. 3. Long stroke 36" SUPER log gang with automatic overhang, syncronized feed. 4. All steel welded, free-wheeling, powered outfeed rolls with transfer lift skids.

Record Smashing Performance Figures Show Why Mill Engineering Gangmills COST YOU LESS!

Anyone can cut 100,000 bd. ft. per day providing they have the trees! But what about costs! Excessive handling, jam-ups, operator fatigue and breakdowns rob your pockets every day!—to say nothing of tons of sawdust needlessly going up in smoke! Utilization starts with the first cut into the log regardless of what you do with the "chips"—and time out for tinkering with temperamental equipment comes out of your paycheck!

Gangsaw Efficiency Goes To Work

The equipment shown above, now in operation at Port Gamble, Washington, reaches peak efficiency at the rate of 80 to 100 m bd. feet per day!—just one example of hundreds of successful Mill Engineering installations that have consistently shown above-average profit figures. One installation is now producing 90 m bd. feet per day with only 5 men on the mill floor! Another reports a yearly maintenance bill averaging less than 8c per day! Still another reports that recovery is averaging 130 to 150% of log scale!

High recovery and the equally high **job performance** ratings of Mill Engineering SUNBO and SUPER installations are the result of perfectly matched, precision engineered equipment, custom designed around the natural efficiency of the gangsaw.

Compare Results—Not Insta'lation Costs!

Don't be misled by low price quotations—get proof of performance before you buy! Mill Engineering has the equipment—and the proof—call us today and make your own comparison.

NOW AVAILABLE FOR EARLY DELIVERY! Place your order now and start making Extra Profits this Summer!

MILL ENGINEERING & SUPPLY CO.

3311 FIRST AVE. SOUTH
SEATTLE 4, WASHINGTON
MUtual 7670

WCLA Meets in Portland

(*Continued from page 53*)

dividual boards. The regulation would set a maximum 3⅝ inch finish size on "2x4" dimension, for instance, thus forcing mills to finish it 1¾ by 3¾ inch to be on the safe side, instead of 1⅝ in. x 3⅝ in. without reference to moisture content. Green lumber mills thus would be forced to oversize their manufactured production.

In official reports to WCLA membership, it was revealed a water shipping rate boost is being discussed, a car shortage could happen again this summer since U. S. railroads now have a surplus of only 500 cars with peak demand still far in advance, and, if railroads are granted the rate increase they now seek, it may mean an 18 cents per 100 pounds increase in lumber shipped from Portland to Chicago, adding to the competitive disadvantage between Douglas fir and eastern and southern species.

The money shortage will continue through 1957, but it will not be quite so severe in the last half if present indications are correct, predicted Walter M. Leuthold, Deer Park Pine Industry, Deer Park, Wash., president, National Lumber Manufacturers Association.

The boom "has leveled so far that lumbermen now look at thin order files with dimension selling at a loss on the average cost, but we may not have to wait too long for an upturn that will help lumber if we don't allow ourselves to be outsold by our competitors," he told the three-state meeting.

Leuthold was confident the lumber industry would hold its own in competition with other materials. He cited the need for low cost school buildings as offering a great potential market for lumber.

There has been no great restriction on bank credit, and loans showed an increase last year, reported Herman N. Mangels, Federal Reserve Bank, San Francisco, Calif. He explained the working of the Reserve System.

Mangels said that although home building at the present is down, it was his opinion there would be some 1,000,000 starts in 1957, "not much off from last year."

He said the West Coast is in a particular favorable position because the area is expanding greatly and more homes will be needed. In addition, there is a "tremendous" backlog of non-residential construction on the coast.

Advertising Award

The Oregon Advertising Club presented to president Nat B. Giustina the Mac Wilkins sweepstakes plaque award for outstanding advertising, as reflected in the West Coast Woods promotion program.

Robert Mahaffey is trade promotion director for WCLA in charge of this promotional campaign.

Highlights of WCLA committee reports:

Carloading. Experiments with mechanized methods of loading packaged lumber in box cars indicate that a two-door box car used by Seaboard Air Lines offers best possibilities. Perhaps 25 per cent of the Douglas fir region's orders would fit such a car, which has one 20 foot door on each side at each end. Loading ramps of most mills would have to be revamped. A resolution was passed asking National Lumber Manufacturer's Assn. to urge the building of more cars of this type.

Polythelene lumber covers in general have been found unsatisfactory. The material is vandalized enroute and doesn't stand abrasion too well.

It costs from $3.50 to $4.00 per M bd. ft. to wrap, strap and load packaged lumber.

Open flat car loading of lumber is being tried by more mills than box car loading. It offers best means of more mechanized handling of lumber. Specified lengths are the only type of order adapted to package handling.

Traffic. Railroads are asking for a 22 per cent freight rate increase, six per cent of which was granted in December 1956. Hearings will be held soon by ICC determining whether railsshould get balance of the increase. Net result may be that total increase will be from 10 to 12 per cent, considering December's boost. WCLA, joining with California Redwood Assn. and Douglas Fir Plywood Assn. will petition for a hold-down, opposed by the southern lumber groups.

Promotion. Lumber grading schools have proved effective. A series of color slides have been developed, which show grade characteristic and typical construction uses. Inspection services at lumber yards have proved helpful. Four basic building plans have been developed for farm structures. Promotion literature now includes 70 or 80 items. A use booklet on western red cedar will be published soon. A brochure on lower grade hemlock is being considered.

Insurance. Rate reductions on unsprinklered building coverage have averaged about 30 per cent. Advice: read your policy—the fine print—to see what actual coverage you have. Insurance companies will develop less liberal attitude toward claim settlement with rate reductions.

Maritime. Possibility of an increase in rates, particularly if railroads get increase. A growing trend toward packaging lumber, but not many ships are built to handle packages. Shipping rates offer advantages for banded, packaged lumber.

WCLA Directors

L. N. Reichmann, Weyerhaeuser Timber Co., Everett, Wash.; **R. L. Gardner,** Seaboard Lumber Co., Seattle, Wash.; **W. R. Garnett,** St. Paul & Tacoma Lumber Co., Tacoma, Wash.; **F. R. Maw,** E. K. Bishop Lumber Co., Aberdeen, Wash.; **Lester J. Harding,** Columbia-Hudson Lumber Co., Bradwood, Ore.; **L. J. Roedel,** Oregon Lumber Co., Dee, Ore.

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George C. Flanagan, Elk Lumber Co., Medford, Ore.; **Judd Greenman,** Portland Ore.; **N. B. Giustina,** Giustina Bros. Lumber Co., Eugene, Ore.; **E. H. Houston,** International Paper Co., Long-Bell Division, Longview, Wash.; **E. H. Jenkins,** The Booth-Kelly Lumber Co., Springfield, Ore.

G. E. Karlen, Orwaco Land Co., Tacoma, Wash.; **A. A. Lautmann,** Kogap Lumber Industries, Medford, Ore.; **William Swindells,** Willamette Valley Lumber Co. Portland, Ore.; **Nils Hult,** Hult Lumber Co., Junction City, Ore.; **Ruben T. Ross,** Globe Lumber Co., Eugene, Ore.

Robert R. Waltz, Seattle-Snohomish Mill Co., Snohomish, Wash.; **W. M. Black,** Seattle Cedar Mfg. Co., Seattle, Wash.; **Ward Mayer,** Timber Structures, Inc., Portland, Ore.; **Paul Christerson,** Pope & Talbot Inc., Portland, Ore.

John Aram, Weyerhaeuser Timber Co., Tacoma, Wash.; **C. H. Bacon, Jr.,** Simpson Logging Co., Shelton, Wash.; **Clay Brown,** Fortuna Sawmills, Inc., Portland, Ore.; **J. N. Cheatham,** Georgia-Pacific Plywood Co., Portland, Ore.; **W. A. Culkin,** Stebco, Incorporated Vancouver, Wash.

Jack Fairhurst, Fairhurst Mill Co., San Rafael, Calif.; **R. M. Ingram,** E. C. Miller Cedar Lumber Co., Aberdeen, Wash.; **Ellerd L. Larkins,** Larkins Lumber Co., Forest Grove, Ore.; **Wm. Lulay,** Lulay Brothers Lumber Co., Scio, Ore.; **Robert A. Murphy,** McCloud River Lumber Co., McCloud, Calif.; **S. A. Murphy,** The Pacific Lumber Co. Scotia, Calif.; **Al Peirce,** Al Peirce Lumber Co., Coos Bay, Ore.

• One reason given by women for preferring wood kitchen cabinets, built-ins and wall paneling is that it is comfortable to the touch, neither too cool in winter nor too hot in summer.

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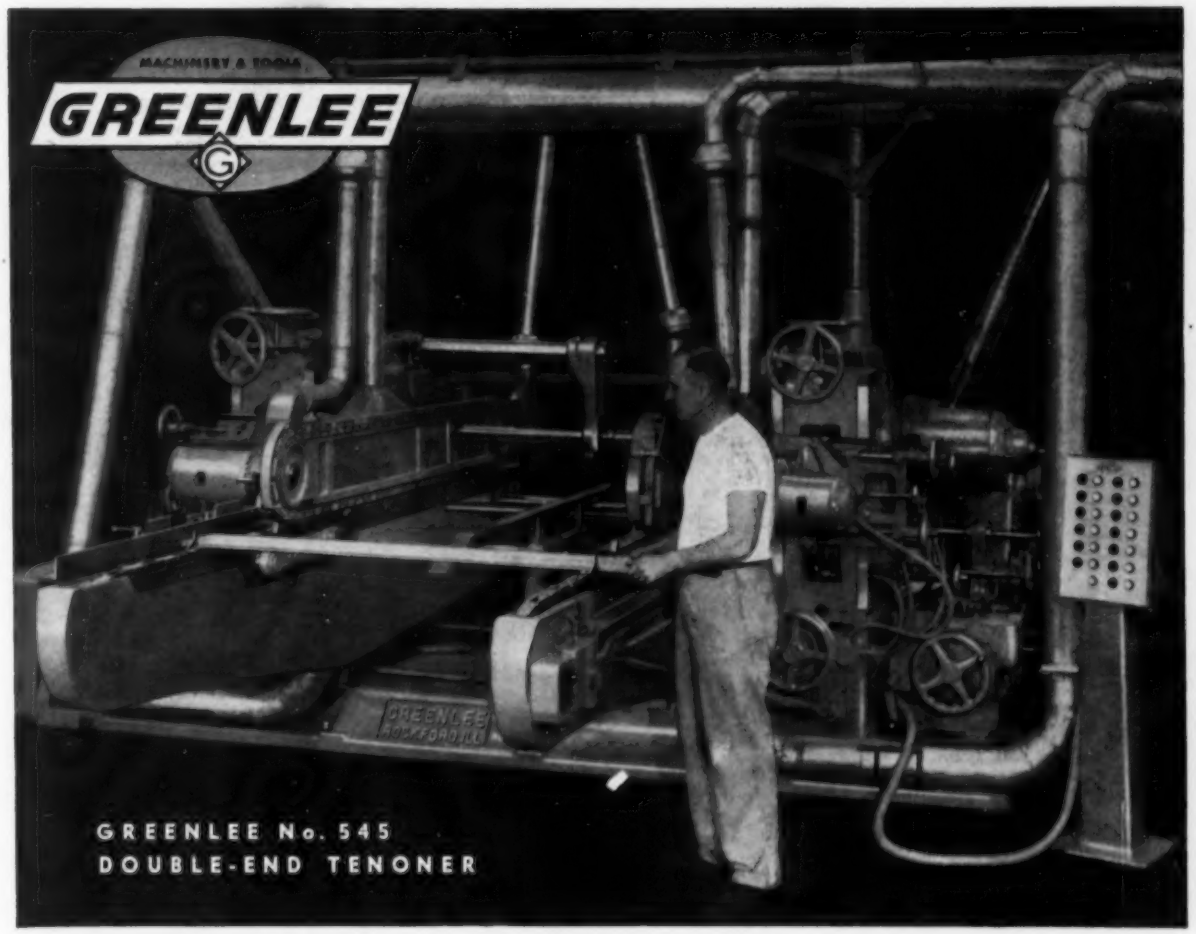

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This is a matter of record for all to see (plant names and case histories on request).

Phenomenal, yes . . . but not surprising, because this versatile machine can perform many cost-cutting operations in one pass . . . dadoing, scoring, dovetailing, notching, relishing, sill-horning, irregular shaping, etc.

It works to close tolerances, too . . . a few thousandths if required . . . eliminates costly "hand fitting". Well-known for its low-cost, long-lived, trouble-free operation.

Write for complete information on the Greenlee Double-End Tenoner . . . or better, let us arrange for a demonstration. You'll be amazed at the production possibilities it offers.

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6 BIG ADVANTAGES

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GENERATED TYPE CUTTER HEADS

1. No lost life in holding device. Generated cutter designed to use all the cutter form for cutting.
2. Generated cutter design gives equal cutter life in 4-6-8-10 or 12 knife heads.
3. Heads dynamically balanced to run smoother without vibration or chatter.
4. Greater throat room—no loading up and no chip marks on work.
5. Built-in chip breakers—no wear on heads from chips.
6. No holders, clamps or gibs—knife changes are quick and simple.

Got a cutter head problem? We'll be happy to supply you with any information you need on the application of Disston Generated Type Cutter Heads to your own specific problems. Write: Henry Disston Division, H. K. Porter Company, Inc., Philadelphia 35, Pa.

HKP Henry DISSTON DIVISION
H. K. PORTER COMPANY, INC.

Plywood Supersiding

(*Continued from page 61*)

dipped in pentachlorophenol solution and packaged in sturdy cardboard cartons for shipping.

The siding should have good vapor transmission qualities to prevent condensed moisture within the exterior walls of houses. Since the core boards are not edge-glued, they allow the vapor to exhaust through outer portion of wall fastener than it can penetrate inner wall lining, thus making it unlikely that condensation will develop.

Diamond Lumber Co. also plans to produce vertical Super Siding in 4x8 sheets. Sheets of vertical siding could be grooved according to the customer's specifications, with either a ½" "V" groove or a ¼" deep groove similar to the Texture One-Eleven pattern. The grooves would be sawn directly into the Crezon overlay surface.

Salmon River Logging Co.

(*Continued from page 57*)

rollcase and picked up on the feed transfer chain. The feed chain is also controlled by the edgerman to avoid pileups in his machine. The edger offbears to the trimmer feed transfer.

Sawmill superintendent Don Brannan supervised the installation of the machinery which was installed without a mill shutdown.

The installation is in a 24x105-foot addition made to the main building, with work done by company crews. The original mill built in 1945, is located at the junction of the Little Salmon and the main Salmon River. The peninsula is surrounded by high canyon walls, requiring careful planning of all plant additions to take advantage of limited space. At this point the Salmon River reaches civilization again after its 200 miles of "no return" status westward from Salmon, Idaho, in some of the most isolated country in the United States.

California Redwood Assn. Staff Member Passes

PAUL E. OVEREND, member of the California Redwood Association staff and well-known to retail lumbermen throughout the West, died on March 10. He was approaching his 70th birthday. He went to work with the California Redwood Association in 1939. From that time until the outbreak of World War II, he did field work with lumber dealers for the association.

During World War II, he served member companies and others on the problems concerned with government controls and the procurement of supplies. Following World War II, he did field work with lumber dealers in Northern California.

...how else could you move ¼ billion feet so well?

Producing 12 million board feet of lumber plus 7½ million feet of plywood monthly, this Roseburg, Oregon mill operation is a bit too big to be typical. But they solved their problem of handling the tremendous output in a way that *is* typical of many mills and yards today.

To move more than ¼-billion feet annually through all phases of operation from receiving to delivery they standardized on Gerlinger material carriers. And bought high-stacking Gerlinger fork lift trucks to "feed" them.

Features like these made their choice of 7 Gerlinger carriers a wise investment:

- Superior cab-to-road visibility
- 4-Speed synchromesh transmission
- All-welded structural steel frame
- Smooth-riding helical coil springs
- 4-wheel power-assist brakes
- Reserve-power overhead valve engine
- Choice of 6- to 30-ton capacities

Get more detailed information from Gerlinger Carrier Co., Dallas, Oregon.

Leaders for 38 years in building Fork Lift Trucks and Carriers

TOWMOTOR - GERLINGER
THE ONE-MAN GANG

Gerlinger Carrier Company, Dallas, Oregon, is a subsidiary of Towmotor Corporation, Cleveland, Ohio

Electric Carriage Drives

(*Continued from page* 41)

On the basis of these tests and observations it seemed advisable to limit maximum total power surge resulting from the drives to not more than 1000 kw, and motor shp to less than seven percent. This was accomplished by suitable motor design combined with a 6000 hp. second flywheel for each M-G set.

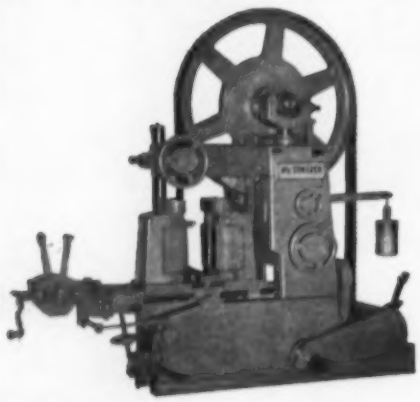
ADDITIONAL ADVANTAGES resulting from the flywheel included a substantial reduction in size and initial cost of driving motors for the M-G sets and a reduction in the new power requirements of the drives, which in turn, reduced the overall operating costs.

Probably design specifications for this application were a little more severe than necessary but expense that would have been involved in correcting a mistake of this nature justified the small additional cost involved in taking a conservative position.

Operating experience over the past three years, shows that at no time during this period have interruptions in the paper making operations been traceable to the log carriage drives.

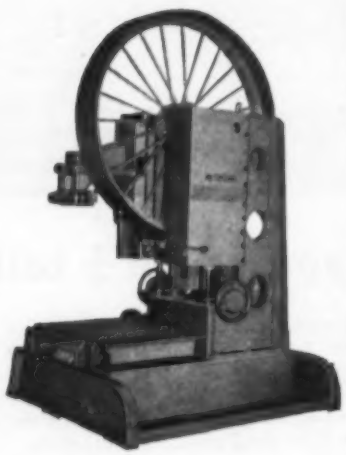
• Kenneth (Jack) McDonald has been appointed Oregon safety supervisor at Portland, Ore. for Simpson Logging Co., covering the Portland, Albany, Lyons and Idanha plants. He comes from Kaiser Aluminum Co., Spokane, Wash.

MORE OVER-RUN pays for Modern McDONOUGH Resaws ...Band Mills



Reduction of kerf plus closer sawing to dimension adds up to extra over-run that pays for a modern McDONOUGH Resaw or Band Mill in a surprisingly short time. And the better price that you get for band sawn lumber puts added proof its in your operation.

The 54" McDONOUGH Vertical Band Resaw (above) incorporates the most modern engineering with modern design to provide a rugged machine of high output combined with extreme accuracy. From base to top wheel, the advanced features of McDONOUGH Band Resaws insure maximum production of accurately sawn lumber with a minimum of down time and maintenance. They are available in 44", 54", 62", 6' and 7' sizes.



The 6 ft. McDONOUGH Band Mill (right) is designed and built for high speed sawing with maximum accuracy. In addition to modern mechanical features that give you extra production McDONOUGH Band Mills give you extra capacity, too. They are available in 54", 62", 6', 7' and 8' sizes.

For complete information and specifications on McDONOUGH Band Resaws or Band Mills ask your McDONOUGH Dealer or write:

McDONOUGH MANUFACTURING CO.
1502 Galloway, Eau Claire, Wisconsin

Tall Timber

(*Continued from page* 5)

the age of 16 came upon a birds' nest stocked with eggs, and formed a hobby interest for life. Since no one yet has been able to collect bird eggs without removing them from the nest, it follows that Bill's new hobby ran athwart some Boy Scout tenets of the time. As a result, one of his more memorable early collections was a demit from the Scouts. Unawed by this action, Bill went right ahead with his oology. One of the inspiring lessons he soon learned is that birds have a built-in urge about eggs. If they lose a clutch they produce another.

Bird lore and questing for eggs has been Griffee's vacation joy ever since. He has been to Alaska and Canada after specimens. He has happily traveled 2,500 miles on just a report that such-and-such eggs were to be found. Maybe he has trekked even more miles than that in search of eggs of the Franklin grouse, but he hasn't hit that jackpot yet. Nevertheless, the display in the basement of his Oswego home is a proud one. It numbers some 750 species and sub-species, all neatly catalogued and meticulously stashed (in Ponderosa pine cabinets, of course, most of them built by Bill himself.)

The eggs range from tiny things the size of a baby's fingernail to jumbos big as a logger's fist. In the course of his investigations Bill has made some scientific discoveries. Too, he had been issued a Fish and Wildlife Service permit to pursue his hobby in the interests of science. Information he develops is made available to other oologists and scientists in general.

Mrs. Griffee and their daughter Nancy, an OSC student, are secretly proud of his collection but they don't dare give him too much rope.

Bill is still collecting, and is about as agile on high rocks as ever. He's adept at use of climbing irons to reach aeries in lofty snags. He can infight with falcons in the Pilot Rock country or trade with Eskimos in the far north. They don't fool him, either. He knows his eggs.

Facts are Bill's bosses. He has the faculty of seeing things as they are, and that helps him get to the root of problems fast. You can't stampede him and he won't indulge sham. His letters, like his talks, are clear and incisive. His counsel is prized in the industry. You will have a hard time stumping him on any question about the intricate subject of lumber. If you ever find him out on a limb, chances are it will be one with a bird's nest on it.

• Homes are getting bigger in floor area, according to the West Coast Lumbermen's Association. Informal family living, with more home activities, leads Americans to build larger homes with more living space.

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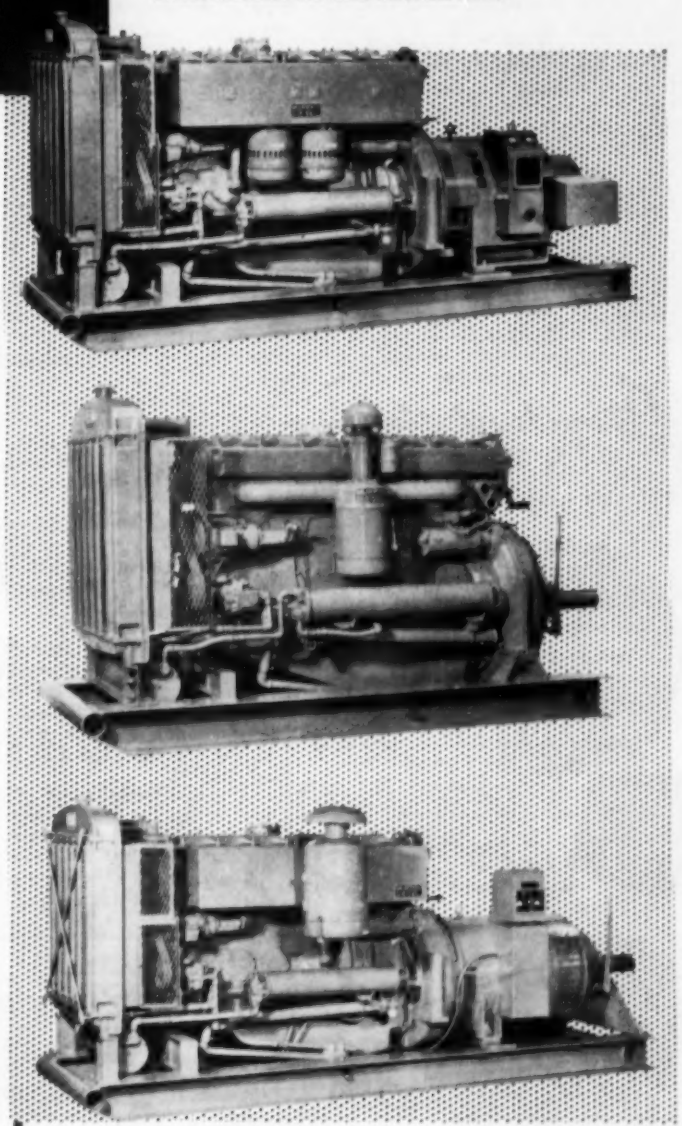
3 WAYS

to get more profit per board foot

The *right* kind of power for your mill is profitable power—heavy-duty power that meets your needs, dependably, and with minimum fuel costs . . . power that reduces downtime . . . responsive power with the lugging characteristics necessary for sawmill work.

In the complete Murphy Diesel line you get this kind of power in a choice of types . . . mechanical, electric, or both. Ask your Murphy Diesel Dealer for full information.



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ELECTRIC GENERATOR SETS

Murphy Diesel Electric Generating Sets are engineered as unified electric power packages in models delivering from 64 to 165 K.W. They may be radiator or heat exchanger cooled and equipped for manual or remote starting. They are complete packaged units providing a power source for all requirements.

When your mill is run mechanically . . .

MURPHY DIESEL ENGINES

AND POWER UNITS

Heavy-duty Murphy Diesels are available as engines or standard power units or with extended shaft and outboard bearings; radiator or heat exchanger cooling. Altitude models which maintain sea level ratings up to 9000 ft. are also available. Sizes range from 96 to 264 H.P.

For both mechanical and electric power . . .

MURPHY DIESEL MECH-ELEC UNITS

The Murphy Diesel Mech-Elec Unit is a combined power package which delivers electric power and mechanical power separately *or simultaneously* . . . the convenient, economical answer for jobs that require efficient mechanical power for the major load plus flexible electric power for secondary loads.

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MURPHY DIESEL

MURPHY DIESEL COMPANY

5351 W. Burnham St., Milwaukee, Wisconsin

SALES . . . PARTS . . . SERVICE

Throughout the Nation

Do-It-Yourselfers

(*Continued from page 52*)

According to C. A. Gillett, American Forest Products Industries, Inc., Washington, D. C., who had a recent survey made by the group to prove his statements, the forest products industries have come a long way in the past four years in bettering public relations but as yet not everybody in the Nation loves them.

"Far too many people don't like the way they think the industry is managing its forest lands," said Gillett.

The forest conservation committee recommended to the board of directors of the association that it authorize its president to appoint a task force of representative members to call on the Secretary of Agriculture or other government officials to see about correction of injustices in timber appraisal and timber sales contract matters, and that the association continue its program of getting a stumpage appraisal manual and timber sale contract acceptable to the industry.

Safety Committee Established

A new committee was set up by the association — safety. District safety committees are to be organized with the district member to be chairman. Members of the committee are to be appointed by each district chairman and restricted to about three in top management. Each district committee is to organize and sponsor quarterly safety meetings. District meetings will be of a conference table type.

This work is important because state and national safety legislation is being aimed at the lumber industry. A little improvement in 1956 over 1955 in logging and sawmilling safety has been noted.

THE GRADING COMMITTEE REPORTED on a study of possible improvements in the reinspection provisions of grading rules. These proposals dealt largely with a change of phraseology rather than basic changes.

A more realistic moisture content provision to grading rules of the association was also recommended by the committee.

The moulding committee reported on work being done to publish a new Western Pine Association moulding book. The book is planned for publication before the next semi-annual meeting.

The promotion committee reported that a new color film showing the use of Sheet-Board (mentioned above) has been made. This product is expected to open a wide market for the lower grades of the log.

However, wider distribution seems more of a production problem and it is recommended that the Association circularize all of the mills, calling their attention to the possibilities of getting a greater share of the sheathing market.

A grand total budget of $647,000 was set up for promotion, which includes $307,845 for space advertising and publicity.

The research committee told of the work on Sheet-Board, and also said that a big portion of the committee's budget is earmarked for seasoning consultation and fundamental research. An additional man has been added to the staff for this purpose. In 1955 about 71% of WPA production was kiln dried.

THE RESEARCH STAFF believes that it has discovered the cause of brown stain and that it can be controlled. Other projects that the research staff is working include: lumber manufacturing improvements; equipment evaluation; education and technical skills; waste utilization; improved realization (product development); dimensional stability; and packaging and appearance. The budget for the nine fields of research was set at $130,500.

Four Western Piners Honored

Four members of the Western Pine association staff were honored by S. V. Fullaway, Jr. for long service. They were Vern Johnson, chief of the grading bureau, 37 years; J. W. (Jack) Stewart, lumber inspector, 34 years; Mrs. Alene Freeman, cashier- bookkeeper, 34 years, and Hugh A. Gillis, traffic manager, 30 years.

The statistical committee recommended that all members report all sales of 1,000 bfm or more, particularly the low grade which is sold to farmers and others by the load. Otherwise WPA statistics will not show how much low grade is actually produced.

The traffic committee recommended that the association go on record as opposing any increase in freight rates. It reported that eastern and western railroads were seeking an increase of 22% in their rates from and to their respective territories. The maximum increase on lumber is 18c, which will be reduced by the six cents authorized on December 28, 1956.

• Oregon has been the nation's leading lumber producer since 1938.

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ANTI-STAIN SPRAYERS

Logs: fir. Average measure, 320 bf each.

In spite of soft footing, big timber, heavy schedule . . .

New Michigan 25-ton truck crane loads 235 big logs per day

FOR DAVIDSON LOGGING COMPANY, GIG HARBOR, WASHINGTON

Average slopes of 65% . . . road grades up to 28% . . . that was the sort of land Davidson Logging Company had to log out near Rockport, Washington, for Buchanan Lumber Company of Olympia. Into this rugged, rain-soaked country went Davidson's big logging trucks, and with them drove a new Michigan 25-ton truck crane. Objective: get that timber out—quickly, safely, economically. And they did it! Though each log averaged 320 feet board measure, their Michigan loaded an average of 235 logs every day.

Operator likes speed and maneuverability

Operator Dave Stone believes no other 25-ton crane "roads" at such high speed (39 mph!), yet has so much mobility in soft footing and steep grades of the woods. He swears by the planetary-wheel drive axles—with 3-to-1 reduction in the wheel hubs, axle shaft torque is reduced 70%, *eliminating* axle breakage. "And maintenance is a cinch!" says Dave. A handy door lets him walk right in to check engine, air cleaner, battery, oil filter. Takes only half an hour per day for lubrication, too.

Foreman likes distributor service

High production and low maintenance costs have sold Foreman Bill Parsons on Michigan. Tells the world he's satisfied with this truck crane, and adds "Thanks for the fine service received from your Seattle Distributor!" (Totem Equipment Company). Parsons also likes Michigan's 6 x 6 all-wheel drive *and* all-wheel air brakes. Those big 11.00-20 tires provide plenty of traction in forest litter, he adds, plus plenty of flotation in loose or wet earth.

How about you?

Could be the Michigan Model T-24 can do *your* loading faster, easier, cheaper, too. Your local Michigan Distributor will be glad to work with you . . . no obligation, of course. Or write us direct, for detailed specifications.

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Construction Machinery Division

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CLARK® EQUIPMENT

Baltic Competes for U. K. Trade

By ROBERT C. HILL

HEAVY BOOKINGS OF BULK cargoes — grain, scrap, ore, sugar, phosphate and fertilizer—continue to maintain a high degree of activity in the world's charter market. The general rate level is down fractionally from that at the beginning of the year. While there are some signs of a recession from recent high peaks there has been no serious drop. However, astute operators are watching developments closely, believing that the zenith of the current shipping prosperity, which began in August 1954, may have been passed.

One of the factors affecting the general situation is the Atlantic coal movement which has marked a sizeable decline in recent weeks.

American lumber exporters find it difficult to compete with British Columbia in the Australian and South African markets. However, Japan continues to buy in small quantities, but in fairly steady orders, on this side. High freights are a deterent to a larger volume of trade. One shipper reports that new highs have recently been recorded in trans-Pacific freights, adding that $54 has been paid for a shipment of lumber and logs, Brereton scale, were booked at $68. These levels are believed to equal if not exceed those prevailing during the war period.

United Kingdom buyers are not active on the North Pacific as in the face of scarce space and the cost of shipping, it is cheaper to import lumber from the Baltic.

BOTH EXPORTERS AND steamship operators agree that stevedoring conditions are highly unfavorable to North Pacific commerce. They charge that labor will not produce in proportion to the high wages in effect.

The Suez canal problem is still the $64 question. Almost six months after the waterway was closed to international traffic, the date when it will again be available to the shipping of the world remains unannounced. When it is once more in service many steamship lines will have to reroute their fleets. Resumption of canal traffic is expected to have a bearish affect upon ocean freights but the extent of this anticipated decline will probably be determined by many other collateral factors.

The Japan market has been absorbing a fair volume of logs from the Pacific Northwest but the future of this business is said to be doubtful. The prevailing high freights are causing buyers to hesitate while log prices on this side have not followed the lumber market and are reasonably firm with the output restricted. The situation is vastly different from a year ago when logging operations were hampered by unfavorable weather.

Intercoastal operations, with prewar fleets greatly reduced, report no difficulty in selling all available space both eastbound and westbound. The lumber movement is confined to proprietary carriers and this is expected to improve as the season advances although the demand for forest products in Eastern centers shows a heavy decline from a year ago. Sev eral vessels formerly operating coast to coast are now engaged in tramp service where larger profits are obtainable. Schedules have been upset and expenses increased by recent labor disturbances on the Atlantic Coast.

LUMBER CHARTERS IN RECENT weeks include three carriers for British Columbia loading, discharge North Atlantic. One for July-August position was taken at $190,000, lumpsum, free in and out, and two others Aug.-Sept. and Sept.-Oct. respectively at $165,000. Another full cargo, March loading, British Columbia to United Kingdom, was closed at $30 per M. feet. Similar business a year ago was quoted at $22.50.

Time charters, always a good indication of market sentiment, remain at high levels. One carrier was taken for one voyage at $7.40 per d.w. ton per month, another was reported at $6.75 for six months, a third at $6.50 for 18 months. A Liberty-type tramp was closed for 10 to 12 months at $70,000 per month.

Railroad competition may be not far away for the lucrative newsprint business from British Columbia to Pacific Coast states, which in the past has largely moved by water. The land carriers have asked the I. C. C. to cut rates from $1.09 cwt. to 80c cwt. from Powell River and Duncan Bay to Los Angeles. This does not equal the water rate but the railroads contend they are entitled to a premium on the grounds that they can handle this easily spoiled commodity with less damage than by steamship.

Differences of opinion have arisen between government officials and shipping executives with reference to the payment of reactivation costs on vessels taken from the reserve fleets for return to service. Under terms of the Maritime Administration's proposed bareboat charter this expense would be saddled upon the charterer. The fund appropriated by Congress to meet this expense is reported nearly exhausted. The matter was recently discussed at a hearing where eleven lines were seeking to charter 67 units of idle government tonnage. The estimated cost of readying a ship for active operation in cases runs as high as $250,000 each and shipping men argued that if they have to assume this burden the government should make compensating reductions in charter terms.

The Klamath Iron Works

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Designed to Boost your better lumber production

Shown here is the Klamath Iron Works Pacific Coast type, 8-foot bandmill. This unit is completely equipped with electric lifts . . . extra heavy construction . . . designed for ease of installation . . . knife-edge strain . . . roller bearing arbors.

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Straight Sidewalls, More Grip, Longer Life
Structurally Balanced for Smooth Running

These Smoother Running V-Belts Lower Your Operating Costs

Condor V-Belt engineering makes the difference. The strength member is micro-positioned in heat dissipating rubber for a smoother running, cooler running drive . . . for longer life with the heaviest power loads. Condor V-Belt sidewalls are made *straight* to put positive pressure on the sheave grooves for more grip . . . less slip. Straight sidewalls help support the super-strength synthetic cords of the belt in a straight line so that *all* cords pull equally . . . deliver their maximum share of power. Controlled length is accomplished through prestretching during manufacture to remove inelastic stretch that might otherwise occur on the job.

NOW . . . Moisture-Proof Vacuum Packaging

R/M's exclusive new vacuum sealed moisture-proof packaging assures positive V-belt length control for users of longer lengths in C, D & E cross sections! Belts are measured at the factory under controlled humidity and identified for precise matching. They are then vacuum-sealed in moisture-proof aluminum lined bags. The result—no shrinkage or elongation in storage . . . sustained uniformity on the drive! Length is certified from the factory to the field.

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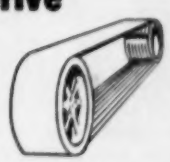
A New Belt Drive Concept For Heavy-Duty Power Transmission. Eliminates V-belt matching problems. Delivers up to 50% more power in the same space as regular V-belts or equal power in less space.



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How a Southern Mill Increased Loading Efficiency, Cut Costs

• ***In the three years*** since the Goodwater, Ala., mill of Sterling Lumber and Supply Co. began to ship packaged lumber, loading time per car has been reduced from 32 man hours to three man hours, the capacity of the Sterling receiving yard in Chicago has been doubled and the company has built a new sawmill.

The packaging and car-bracing method responsible for these developments, known as "Interlace Securement," was developed jointly by Acme Steel Co. and Sterling Lumber with the cooperation of the Association of American Railroads.

Over 400 cars of Sterling packaged lumber secured by the Interlace method and shipped on both standard and permanent-end bulkhead flat cars were inspected and approved at destination by the A.A.R. Not one of the cars had to be recoopered enroute, according to Robert M. Martin, western traffic manager for Central of Georgia Railroad.

The packaged line in Sterling's new mill is located adjacent to the shipping platform. In the packaging operation, after moving through the planer, lumber is stacked to form a unit package consisting of four sections.

One inch by two inch stickers are placed between sections of the unit to stabilize the package and allow uniformity of compression throughout when steel strapping is applied and tensioned.

Upon completion of the stacking, two 1¼ inch by .035 inch Acme Steel straps are positioned around each package about ¼ of the length of the package from each end. Corner protectors are placed under the straps to protect edges of the lumber when steel strapping is tensioned around it. The tensioning is accomplished with an Acme 210XSL Stretcher with a built-in shear. Sealing is completed with an Acme 10D Sealer.

The design and method of packaging individual units has proved to be an important factor in the arrival condition of the Interlace-Secured load. Safe arrival depends upon the ability of the individual package to withstand normal in-transit movement.

When packaging is completed, the strapped unit is picked up with a fork truck and loaded on a waiting railroad car—or stored in a roofed, pole-type open shed for subsequent shipments. Most Sterling unit shipments are made on flat cars equipped with permanent-end bulkends. Central of Georgia Railroad has placed 14 bulkhead cars in assigned service to handle Sterling's packaged lumber shipments and six to eight additional cars are scheduled to be added in the near future.

The bulk of the shipments from the Goodwater mill is industrial lumber in 10-foot lengths. The typical interlaced shipment contains 24 packaged units of lumber in four stacks of six packages each.

After each of the four stacks is loaded on the car, two lengths of Acme Steel 1¼ inch by .035 inch heavy duty strapping are threaded through the centers of the packages in both top and bottom layers. These are the Interlace straps from which the securement method derives its name. Use of these straps eliminates side shift of the top layer of packages and combines the packages in each stack into a stable unit.

In addition to the two Interlace straps, two lengths of heavy duty 1¼ inch by .035 inch steel straps are positioned completely around each stack of six packages. Bracing is completed by securing stub stakes in the stake pockets of the car.

Interlace Securement, which is approved by the Association of American Railroads, is the sole bracing used by Sterling on its shipments of packaged lumber. Packaged lumber comprises 50% of the total shipments from the Goodwater, Ala., mill.

Since early 1954, the mill has shipped over 12,000,000 bd. ft. of packaged lumber, much of it sold on a contract basis. In the three years, John Moeling, president of Sterling Lumber, has watched his shipments grow from single carload orders to the point where, today, ⅓ of his carloads are sold on a contract basis direct to industrial users.

In addition to the immediate economies effected at the mill in handling, stacking and loading. Sterling customers benefit from economies in unloading and handling operations. Customers find they can unload packaged lumber from Sterling cars in less than two man-hours with the use of fork trucks. Packages may be stored intact or easily broken down for immediate use throughout customer plants.

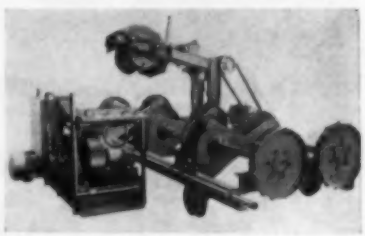
"The future of the lumber business depends upon package shipments," said Mr. Moeling recently. "We can not compete with substitute materials except through improved handling and shipping methods to reduce costs."

"With the use of mechanized equipment we expect to achieve a rate of 1,000 board feet per man-minute in all handling of packaged lumber," said Mr. Moeling.

"The accomplishment of this goal will mean we can load a car two hours after receipt of an order," he added.

Robert H. Martin of Central of Georgia says, "We have found that the assignment of flat cars equipped with permanent-end bulkheads to Sterling Lumber for these shipments has resulted in the following economies for the railroad: (1) 50% faster turnaround; (2) Elimination of the necessity for recoopering enroute; and (3) Up to one-third heavier payloads per car."

New Mechanical Barker For Small, Medium Mills



• White River Machine Co., Rochester, Vt., is now producing the new Eaton log barker (above) for medium and small sawmills.

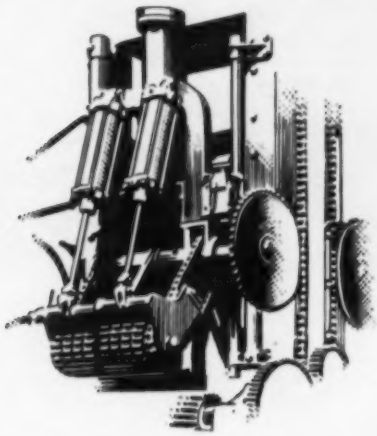
The first machine, installed at the Eaton Lumber Co. in Rochester, has been in uninterrupted operation since 1955, and the unit has been thoroughly field tested for efficient performance under the most extreme weather conditions.

The chain-flail type Eaton log barker has these features: low installation and maintenance cost, heavy construction, attractive output and one-man operation. It satisfactorily debarks logs from 5 inches to 4 feet in diameter and can debark as much as 30,000 bd. ft. of logs in an 8-hour period.

According to the manufacturers and users, this machine literally "turns wood waste into pulp chip dollars." Write Dept. DB-1, White River Machine Co., Rochester, Vt., for illustrated bulletin and complete details.

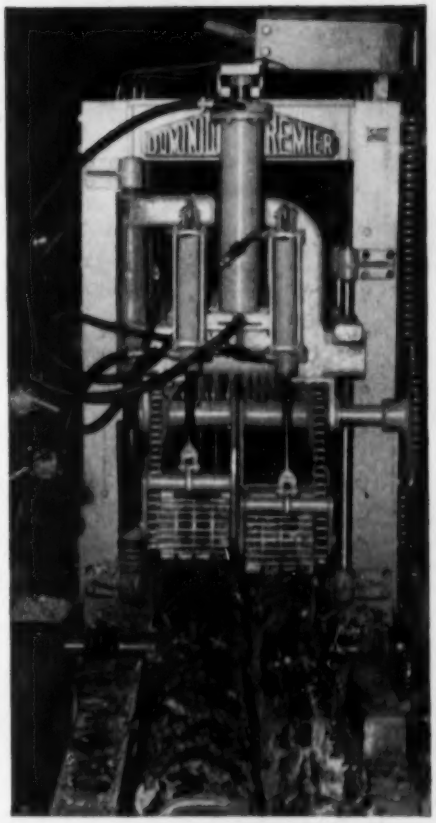
• Oregon's annual lumber output is around 8 billion board feet, enough to build about 800 thousand five-room frame houses.

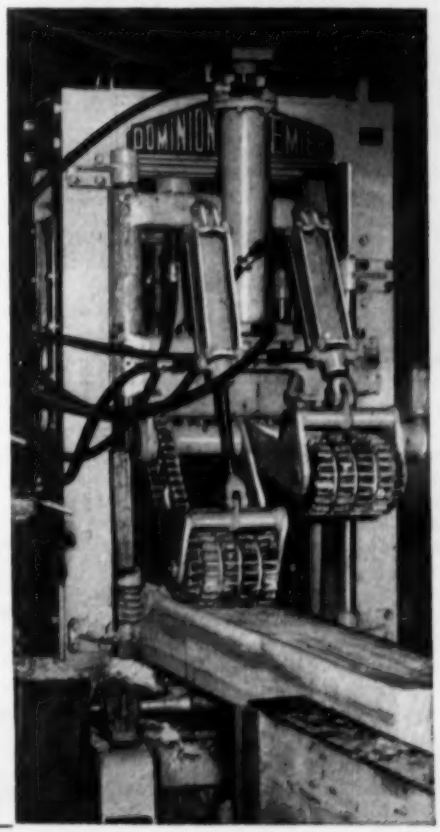
This is the answer to your small log and cant problems!



New split feed rolls now available for

DOMINION PREMIER GANGSAWS





FEATURES

- Production increased up to 60% with logs of 12" diameter or less.
- Up to two logs or four cants sawn at a time. Each feed roll adjusts automatically to varying diameters. With two small logs or cants, feed speeds up to 1¼" per stroke.
- Overhang of top feed rolls eliminates log bounce—even on eight foot logs.
- Existing machines easily converted in four hours.
- All steel-construction—built specifically for North American conditions.

Write for full particulars.

DOMINION BRIDGE COMPANY LIMITED

P. O. Box 160, Vancouver B.C., Canada • Phone Glenburn 1000

Represented in Oregon, Northern California and Nevada by FRED E. BARNETT COMPANY.

Represented in Idaho and Montana by FOREST PRODUCTS CO., Kalispell, Montana.

Represented in Washington by MILL EQUIPMENT INC., Seattle, Wash.

Represented in Colorado, Arizona and New Mexico by MR. ROBERT S. BADER, 142 Broadway, Denver, 3, Colorado.

Represented in Oregon by PORTLAND CHAIN MANUFACTURING CO., 4000 Northwest Yeon, Portland, Ore.

LESTER ANDERSEN
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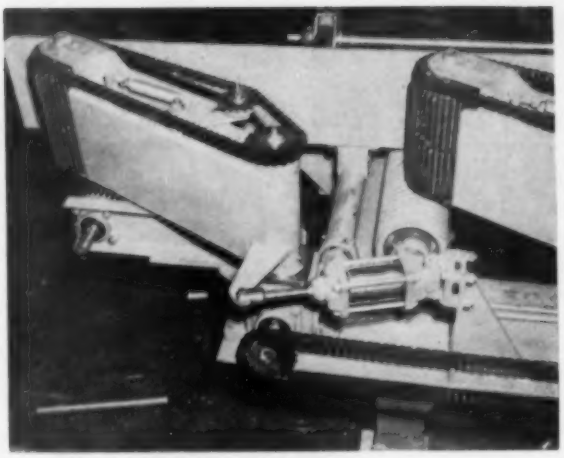
LE ROY C. ANDERSEN
Pres. - Gen. Mgr.



PRESS ROLLS of line bar currently manufactured by Portland Iron Works. Air-cylinders replace inertia loads and counterweights. The gear boxes (shown here) are filled with oil to provide maximum lubrication and prevent fouling. Press rolls open to full 24-in. and Veneer adjustment instant change scant or strong cutting.

Portland Iron Works Marks 75 Years

This year Portland Iron Works, Portland, Ore. celebrates its 75th anniversary as a manufacturer of machinery, engines, transmission and sawmill equipment. LeRoy Andersen, president of the firm, played a great part in its development. The vision, inventiveness, and business acumen of the founder, Orlando Clarke, his son, Harry Clarke, and Mr. Andersen, present an unusual combination of talents which have permitted the survival of Portland Iron Works in a highly competitive business.

Orlando Clarke came to the Northwest in 1882, from Rockford, Illinois, where his Rockford Iron Works had been among the best. It had, in 1870, taken the Premier Medal and a prize of $15 in cash at the Illinois State Fair, for a boiler which would heat 150 pounds of hog mush to the required temperature in record time.

A building of the old Smith and Watson Iron Works on Portland's east side was leased to Clarke in February, 1882, to manufacture agricultural equipment. But Clarke soon attached himself to railroading, which had better markets, because the North Pacific Railroad was bringing a line through.

Portland Iron Works soon moved to the west side of the river, where the firm still stands in its original location. Again, Clarke saw the need to change his markets and turned his efforts in the direction of steam sawmill and logging machinery. In the woods and mills he found a stable market.

Orlando Clarke died in 1888. Control of the Portland Iron Works then passed to his son and co-worker, Harry, who chose LeRoy Andersen and Andre J. Wolff as his men of responsibility. Wolff became chief engineer and remained in that capacity until his retirement last year. Andersen was hired as payroll clerk and stenographer. Although Andersen wanted to be an attorney, he became involved in plant operations. He rounded out his education in the shops. Early in 1919 Andersen was made plant superintendent and, after Harry Clarke, son of the founder, died later in the year, Andersen became manager.

Emphasis on timber and sawmills did not change, but interest expanded to encompass the construction of steamboat engines, dredges, bridges, and any industrial machine job that required iron or steel.

In 1947, ownership of the plant, which had been in the hands of the Clarke family, was purchased by Andersen. Mr. Andersen became president, Mrs. Andersen, vice-president and their son Lester entered the business for the first time as secretary-treasurer and sales manager.

Lester headed up the formation of a new subsidiary of the company in 1949, "Power Transmission Products", to supply equipment which could effectively transfer force from a prime mover to the machine. Materials handling equipment has also been a major item in the firm's inventory.

Keeping up with the future is part of Portland Iron Work's credo, set forth more than 30 years ago in its published catalogue. It reads in part . . . "we feel privileged to claim that we are especially well qualified to supply machinery and equipment of a type and design most suited and quickly adapted to the ever changing needs of the sawmill and manufacturing plant industry".

New Machines at Work

• A number of eastern mills have recently converted to Mater Machine Works riderless carriages. They include ***Moosehead Mfg.*** Co., Monson, Me.; ***Ward Lbr.*** Co., Moretown, Vt.; ***Newton, Wright & Hardin*** Lbr. Co., Forsythe, Ga.; ***Ramsey Lbr.*** Co., Suffolk, Va.; ***Oval Wood Dish*** Co., Tupper Lake, N. Y.; ***Lumber River Mfg.*** Co., Lumberton, N. C.; and ***Barrow Lbr.*** Co., Ahoskie, N. C. Several of these mills also installed Mater automatic bar turners and loaders.

• ***American Fabricators*** of Bellingham, Wash., glu-lam plant, recently installed a new Buss Model 55 planer. This machine will surface beams up to 60 inches wide and 16 inches thick. It will operate at speeds up to 173 fpm. The company reports that costs for one order could be cut 20% with the new Buss planer.

• A Woods A-480M, 12-knife, 15-inch diagonal planer with profiler and feed table has been installed at the ***Cal-Ida*** mill, Auburn, Calif., where George R. Duff is manager and Martin Berger, planerman. ***Van Vleet Lumber*** Co. at Rainier, Ore., has installed a new Woods A-484M, 8-knife, 15-inch diagonal planer with feed table.

• Oregon's first pulp and paper mill was built in 1866 at Oregon City.

• Earl Hitchman, president of Salem Equipment & Supply Co., Salem, Oregon, manufacturers of sawmill machinery, announces that Victor Utterback (pictured) has been named to the post of manager of production and sales. Mr. Utterback has had wide experience in the manufacture of sawmill machinery and has laid out sawmills for many companies. Among the specialties that Salem Equipment & Supply makes and markets are the Salem bandmill, line of Salem feed works, edgers, carriages and air cylinders.

Change motors in minutes—

with FALK *all-steel* MOTOREDUCERS

No long and costly "down time" involved

Motors can be interchanged or replaced *in minutes* with the all-steel, All-Motor type FALK Motoreducer. No long and costly "down time" is involved in making the change!

Best of all, replacement is not limited to original make of motor—new NEMA frames may be substituted for old. This versatile Motoreducer operates with any make, speed or type of standard foot-mounted motor within its AGMA rating. No modification, no special shaft, no "partial" motor required.

In addition to unmatched motor interchangeability, this dependable gear drive—the "work horse of industry"—offers: widest choice of output-shaft position (horizontal, vertical, right-angle)...any output-shaft connection...any mounting, including wall and ceiling...standard speed range from 1.5 rpm to 1430 rpm. All these advantages, plus proved efficiency, low maintenance and extra-long life, make the All-Motor type FALK Motoreducer your best buy for any job requirement.

Furnished in sizes up to 75 hp with any make, style or type of motor; or, *without a motor if desired.* FALK Motoreducers are available from convenient factory, field or distributor stocks, from coast to coast.

Write for Bulletin 3100

THE FALK CORPORATION, MILWAUKEE, WISCONSIN

MANUFACTURERS OF:

- Motoreducers
- Speed Reducers
- Flexible Couplings
- Shaft Mounted Drives
- High Speed Drives
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- Single Helical Gears
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FALK

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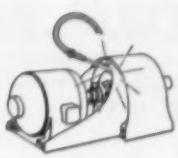
FALK "IN-BUILT" FACTORS assure full dependability—better service—longer life

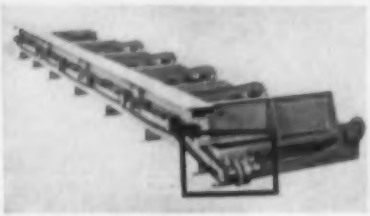
ALL-STEEL HOUSINGS
Rugged, strong, rigid ...all parts heavy steel plate, formed and welded in the Falk Weld Shop.

LARGE OVERHUNG LOAD CAPACITY
Large shafts, oversize bearings...rigid mountings with wide bearing spans to handle maximum loads.

PRECISION GEARING
Heat-treated alloy steel gearing, precision cut and shaved after heat treatment to eliminate distortion.



SEALED HOUSINGS
Splashproof, dustproof, oiltight. Dual closures and one-way vents keep oil in, dust and moisture out.



Free-wheeling Clutch Now Marketed for Gang Saws

• Development of a new free-wheeling (or "over-riding") clutch of completely new design is now offered by Mill Engineering and Supply Co. of Seattle.

Simplicity and great strength have been achieved through major reduction of moving parts, including springs, friction plates and oil seals. The clutch is economical in price. It is rugged and will require very little maintenance. The clutch operates on intermittent, heavy loads at either slow or fast speeds in the presence of grime and sawdust, transmitting power almost instantaneously at the touch of a switch.

Mill Engineering originally developed the clutch for their infeed and outfeed roll cases operating in conjunction with their Sunbo and Super gangsaws. As power is applied, the rolls propel the log or cant into the gang or the cut lumber away from the gang. With power off, the rolls immediately adjust to the feed speed of the gangsaw, eliminating strain on the driving motor. The clutch has undergone a successful period of testing at Seaboard Lumber Co., Seattle, and is now standard equipment.

The clutch may be purchased as a unit and can be adapted to any power roll system to operate with a chain drive (as shown) or attached directly to the motor, or by special manufacture, incorporated into the end of the roll itself.

Additional information can be obtained from Mill Engineering and Supply Co. at 3311 First Ave. S., Seattle.

IH Offers New Power Unit

• A new model diesel power unit, the UD-281, has been announced by International Harvester's construction equipment division.

The 4-cylinder unit has a 60 hp rating at 1800 rpm, five more hp than the UD-264, its predecessor.

This smallest of six diesel power units in the International line has a piston displacement of 281 cu in, with a 4⅛ x 5¼" bore and stroke.

Longer Life Obtained With OK Chipper Plates

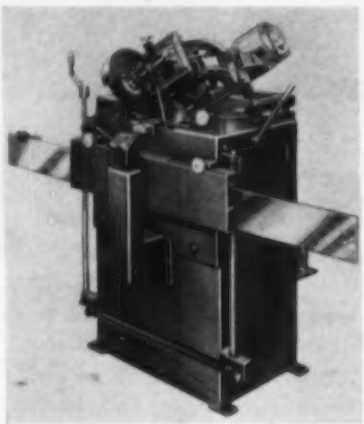
• Now in wide use in many chipping operations are hardened plates made by The Ohio Knife Co., Cincinnati.

OK wear plates have a hardened surface (3/16" depth) of ball bearing tool steel, clad to a mild steel backing. This combination is designed to withstand heavy shock, to outlast plates made of ordinary material, and to deliver more uniform chips.

Cost analyses show the OK plates to be more economical in the long run. Their phenomenally low rate of wear assures minimum replacement and re-grinding. The plates are made to customer specifications and delivered hardened, ground and drilled, ready for immediate installation.

For complete information, write Ohio Knife at Dept. R-50, Cincinnati 23.

Precision Sharpener Is Lighter, Costs Less

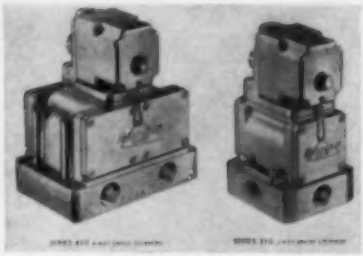


• A new, smaller-size automatic gang saw sharpener which is lighter in weight and less expensive is announced by Armstrong Mfg. Co., Portland, Ore.

Designated the Model No. 20, the new machine is said to retain all the precision features and modern design of the larger, heavier models.

Ball bearing track and saw carriage assure precision accuracy for longer time. Has easy return light steel carriage. The saw is held in position firmly against a specially hardened and precision ground face plate for extremely accurate saw feeding. Fabricated steel has been used at all points where precision accuracy is required.

Further details and information may be obtained from Armstrong at 2135 N. W. 21st Ave., Portland.



New Nopakmatic Air Valves

GALLAND-HENNING Nopak Division, Milwaukee, Wis., has introduced a new line of poppet-type air control valves. To be known as "Nopak-matic," they provide advantages not previously available in valves of this type, according to the manufacturer. Nopacmatic valves are available for pressures to 150 psig, for 2-, 3- and 4-Way operation with master (air), single or double solenoid pilot control. Pipe sizes are from ¼" through ¾". Both single and double solenoid pilot heads incorporate the exclusive automatic "Flow-Director," providing automatic selection of pilot air pressure supply from whichever port is used as inlet and eliminates the need of purchasing special valves for each application or re-assembling parts to obtain desired operation.

Super-hard Carbide in New Greenlee Tool's Router Bits

• Greenlee Tool Co., Rockford, Ill., is making a new line of carbide tipped router bits constructed with high-speed steel bodies.

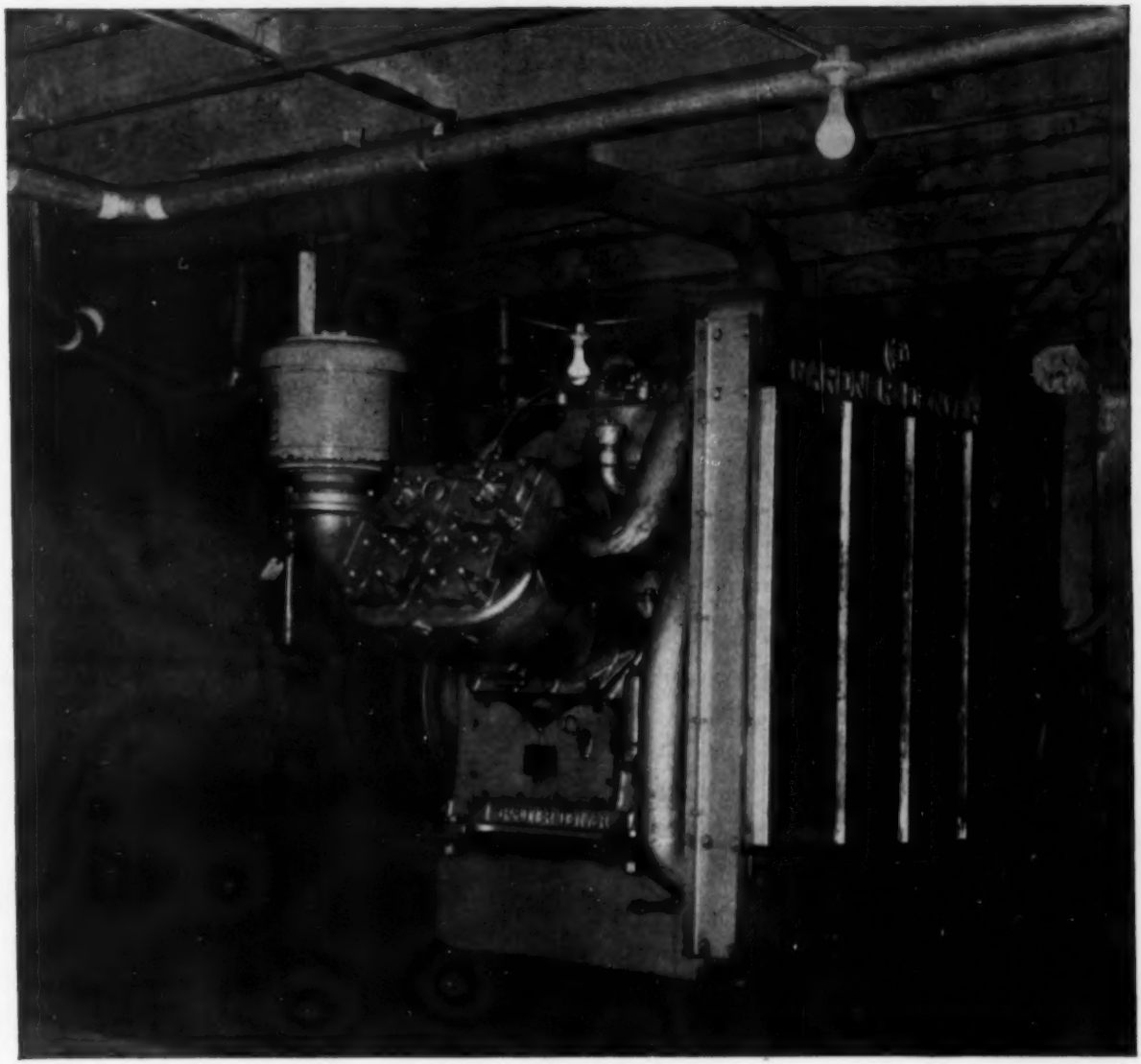
The bits are available with high-speed steel bodies only. Tests show that this material provides the proper stiffness necessary to resist vibration and breakage. It also brazes well with carbide.

Greenlee carbide tipped router bits are precision ground with the correct cutting angle which permits faster, easier cutting and eliminates much of the pushing usually required. The tapered web in the flute provides extra strength and eliminates weak spots.

On extended test runs these bits have proved long-lived and economical. Good results were obtained on plastics, particle board, laminated products and other hard materials.

Complete information is available; send to Greenlee for Bulletin No. M-185.

• Oregon produces 46 per cent of all plywood made in the United States.



Look what Gardner-Denver air power does in a modern mill

This Gardner-Denver WB compressor supplies air power required for operating Gardner-Denver carriage feed drive and air cylinders in an Oregon mill . . . fits right in with modern methods that step up mill production ratings.

WIDE SELECTION: Eight compact WB compressor sizes from 150 to 1200 cfm.

FOUNDATION? Packaged WB units come complete on their own skids. Just bolt them down to timbers or floor.

BULLETIN WB-10 contains specification charts and details of construction. We'll gladly send you a copy on request.

ENGINEERING FORESIGHT—PROVED ON THE JOB
IN GENERAL INDUSTRY, CONSTRUCTION, PETROLEUM AND MINING

GARDNER-DENVER

Gardner-Denver Company, Quincy, Illinois
In Canada: Gardner-Denver Company (Canada), Ltd., 14 Curity Ave., Toronto 16, Ontario
Branch Offices: Seattle, Vancouver, San Francisco, Los Angeles, Salt Lake City, Denver and Wallace, Idaho

New Movie on Grinding Wheels Available Free

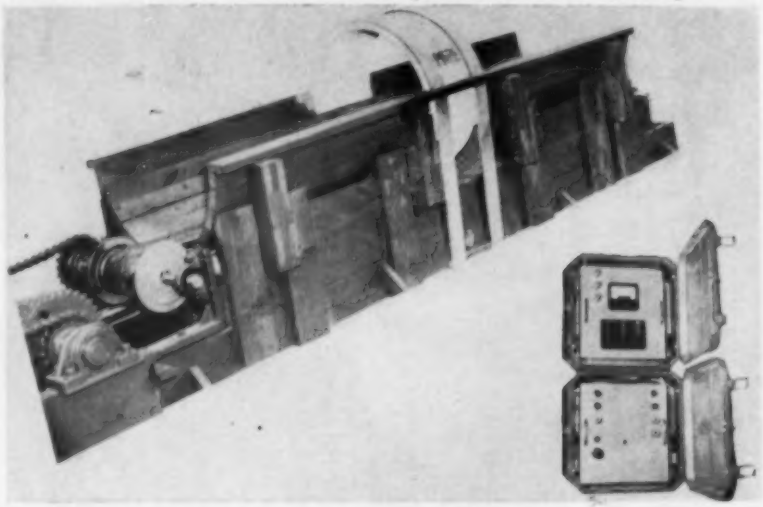
• A new motion picture for industrial grinding wheel users, "How to Select the Right Grinding Wheel," by Norton Co., is available for booking.

New film not only explains meanings of typical grinding wheel markings, but shows the different variations of each unit symbol. It develops recommended grinding wheel specifications for two different and specific grinding jobs step by step so that the viewer has a clear understanding of the reasons.

It is 16mm. sound and color, and runs 30 minutes.

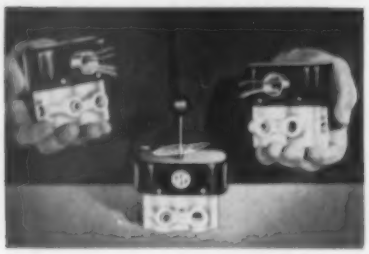
For bookings, write to Norton Co., Worcester 6, Mass., or contact any Norton district office.

Soderhamn Metal Detector Is Operated Electronically



NOW DAMAGE TO KNIVES and saws caused by foreign metal can be prevented. Operators save by elimination of downtime due to repairs. The tramp metal is detected by Soderhamn's new "Metal-Matic detector with adjustable sensitivity. Installation is simple. The detector operates on ordinary 110/220 volts, three phase and can be remotely controlled. Foreign metal passing through the conveyor causes a horn or bell to sound and a dye sprayer to mark the general area on the log containing the metal. There is an accessory that also stops the conveyor. Soderhamn Machine Co. of Talladega, Ala., will pay for all repairs to electronic equipment over $50 a year for a period of three years. The unit is completely enclosed, protected from dirt and moisture and will operate even when partially submerged in the pond.

New-type Valves Operate Without Use of Solenoids



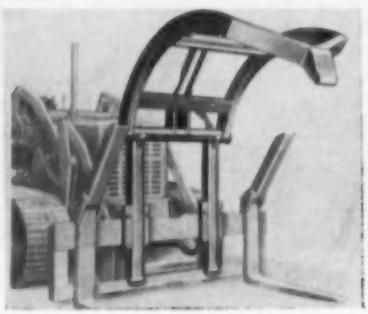
• Development of three new "Quick-Dump" control valves, for fast, smooth operation of double-action cylinders, is announced by Humphrey Products Division, General Gas Light Co., Kalamazoo, Mich.

The new valves (pictured above) are four-way, five-port models. There are no internal springs, packings, pistons, or sliding, metal-to-metal contacts. Valving action is said to be ultra-fast and positive, giving smooth flow, dead-seal closing, extra large capacity and prolonged service life.

Two of the valves are electrically operated and the third is equipped with hand lever. The electric valves have new type electro-magnetic armatures, claimed to be very fast, powerful, and durable. Armature travel in actuating the valve is .022." This short throw, the manufacturer explains eliminates hammering action and reduces wear.

The hand lever valve is designed for mounting on bench, on machine or at production line station. Lever action is by finger-tip touch. Valve "holds" at either forward or backward position of lever.

New Top Clamp Makes Long Log Handling Easier Job



• A hydraulically-operated top clamp for Caterpillar No. 977 Traxcavators equipped with log and lumber forks have been announced by Caterpillar Tractor Co.

This new attachment allows the No. 977 to easily handle large, off-center loads. It is especially useful where logging operations call for the handling of long lengths of timber. The additional stability given the load by the top clamp also enables material to be transported with greater safety over longer distances.

The new top clamp mounts on the standard log and lumber fork, and is controlled by a double-acting cylinder attached to the carriage. A single valve and control lever, mounted on top of the hydraulic tank, actuates this cylinder. The valve arrangement is available as a separate attachment.

Woodworking Association Plans Meeting in N. C.

• The 57th annual meeting of the Woodworking Machinery Manufacturers Association will be held April 25-26 at Mid Pines Club, Southern Pines, N. C.

Highlights of the meeting include a panel discussion with members of the Southern Furniture Manufacturers Association on the 25th. Moderated by J. T. Ryan, executive vice president of the S.F.M.A., the subject of the discussion will be "What we expect from the woodworking machinery industry." A business meeting will also be held at this time featured by a round table discussion on current business conditions. A golf tournament will be held.

Plans have been made for a visit by WMMA members to the School of Forestry at North Carolina State College, Raleigh. Members will tour the wood products laboratory where they will meet the faculty and discuss the college's wood products teaching and research programs.

• Wooden sheathing may be applied diagonally on outer walls of the home to give additional strength. There is also high insulation value in sheathing when it comes from such durable woods as Douglas fir or west coast hemlock.

This is **cost-control** *in* **action**

The Chozen Trucking Company applies it every day—hauls bigger payloads for less with Rugged **Autocar** *Diesel*

Your Autocar representative is trained to aid you in keeping your hauling costs under control! Let him help you analyze your specific operation. With facts and figures, he can show you areas for improvement, and he can show you how the combination of Autocar's rugged design and unit options can save you money.

Call your Autocar man now... ask for your free copy of the White-Autocar Cost Analysis Record Book, your guide to transportation cost reduction.

Mike Chozen, prominent west coast lumber hauler, applies the cost-saving advantages of the Autocar DC102L in transporting finished lumber throughout the Southern California area. For these specific operating conditions, unusual economies were obtained with the following "Unit Option Package": Spicer 8245 4-speed main transmission, Spicer 8035G Aux. Transmission, Timken FE600 Front Axle, Autocar CF Rear Axle with 5.34 reduction and Cummins NHB-200 Diesel Engine.

Sales and Service Facilities Everywhere

THE WHITE MOTOR COMPANY, EXTON, PA. **Autocar Division**

WILLIAMS-WHITE HOT PLATE PRESSES

for Continuous Production

This installation view is typical of Hot Plate Presses, designed and built by WILLIAMS-WHITE & CO. in capacities from 50 to 5,000 tons for the production of plywood, hardboard and allied materials. Each is engineered to your specifications. Take advantage of our designing and building "know-how." For details, write any of our representatives or direct to WILLIAMS-WHITE & CO. Ask for Bulletin 200-A.

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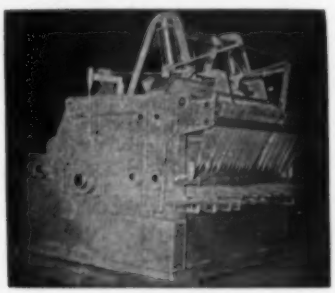
PRESSES • BULLDOZERS • BENDERS • PUNCHES • SHEARS

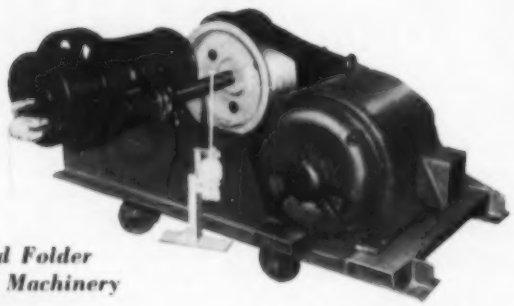
SALEM EQUIPMENT MEETS ALL SAWMILL NEEDS

From a Single Machine To a Complete Sawmill

SALEM Band Mill

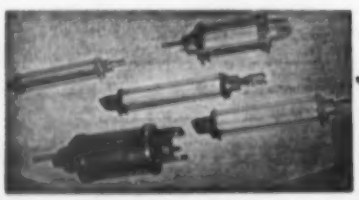


SALEM Edger



SALEM Feed Works

Write for Illustrated Folder on All Types Sawmill Machinery



SALEM Air Cylinders

SALEM Carriage

Salem Equipment & Supply Co.
Earl R. Hitchman, Pres.
3455 D Street • Salem, Oregon
PHONE EMpire 4-4737

Log & Lumber Prices

Columbia River Log Prices

Douglas Fir Peelers: No. 1 $114-119; No. 2 $103-108; No. 3 $82-88.
Douglas Fir Sawlogs: No. 1 $68-73; No. 2 $57-62; No. 3 $48-53.
Hemlock: Peelable $63-68; No. 1 $57-62; No. 2 $41-46; No. 3 $36-41.
White Fir: Peelable $63-68; No. 1 $58-63; No. 2 $53-58.
Noble Fir: No. 1 $44-49; No. 3 $34-39.
Cedar: No. 2 & 3 $37-42.
Spruce: Select $100-105; No. 1 $83-88; No. 2 $53-58; No. 3 $43-48.

Grays Harbor Log Prices

Douglas Fir Peelers: No. 1 $108-113; No. 2 $77-82; No. 3 $42-47.
Hemlock: Peelable $57-62; No. 1 $50-55; No. 2 $40-45; No. 3 $38-43.
Cedar: No. 1 $88-93; No. 2 $47-52; No. 3 $36-51.
Spruce: Select $88-93; No. 1 $63-68; No. 2 $45-50; No. 3 $42-47.
White Fir: Peelable $57-62; No. 1 sawlogs $51-50; No. 2 $40-45; No. 3 $38-43.

Puget Sound Log Prices

Douglas Fir Peelers: No. 1 $108-113; No. 2 $98-103; No. 3 $83-88.
Douglas Fir Sawlogs: No. 2 $62-68; No. 3 $40-45.
Hemlock: Peelable $57-62; No. 1 $52-57; No. 2 $36-41; No. 3 $31-36.
White Fir: Peelable $58-63; No. 1 $53-58; No. 2 $38-43; No. 3 $32-37.
Cedar: No. 1 $86-91; No. 2 $49-54; No. 3 $37-42.
Spruce: Select $88-93; No. 1 $62-67; No. 2 $42-47; No. 3 $37-42.

• Douglas Fir Plywood

¼" AD SOIS .....$72/M sq. ft.

• Red Cedar (industry standard) Shingles

Royals			
No. 1	24"	4/2	$15.50
No. 2	24"	4/2	9.50- 10.50
No. 3	24"	4/2	5.00
Perfections			
No. 1	18"	5/2¼	11.50
No. 2	18"	5/2¼	7.75
No. 3	18"	5/2¼	3.50
XXXXX			
No. 1	16"	5/2	10.25
No. 2	16"	5/2	6.25
No. 3	16"	5/2	3.50- 4.00

• Douglas Fir Lumber Prices

1x8	Utility S4S KD	$ 48- 53.00
2x4	Construction Dimension S4S KD	84- 86.00
1x4	C&Btr VG Flooring KD	170-175.00
1x6	C&Btr Drop Siding KD	158-163.00
1x6	C&Btr S4S KD	170-175.00
1x8	C&Btr S4S KD	170-175.00
1x10	C&Btr S4S KD	170-175.00
1x12	C&Btr S4S KD	215-220.00

CONSTRUCTION Timbers and Plank

3x12	6x20'	$ 84- 87.00
3x12	22x24'	89- 92.00
3x12	26-32'	97-102.00
4x4	8-20'	85- 88.00
4x4	22-24'	90- 93.00
4x4	26-32'	98-103.00
6x6	8-20'	82- 85.00
6x6	22-30'	89- 92.00
6x6	32-40'	104-107.00
8x8	8-20'	81- 84.00
8x8	22-30'	86- 89.00
8x8	32-40'	101-104.00
6x10, 8x10, 10x10, 12x12— 8-20'		81- 84.00
6x10, 8x10, 10x10, 12x12—22-30'		86- 89.00
6x10, 8x10, 10x10, 12x12—32-40'		101-104.00
Crossties		58- 61.00

CONSTRUCTION Dimension (Green)

2x4	6-24'	$ 71- 74.00
2x6	6-24'	72- 85.00
2x8	6-24'	71- 74.00
2x12	6-24'	72- 75.00

STANDARD & Btr. Boards (Green)

1x4	6-20'	$ 49- 52.00
1x8	6-20'	61- 64.00
1x12	6-20'	61- 64.00

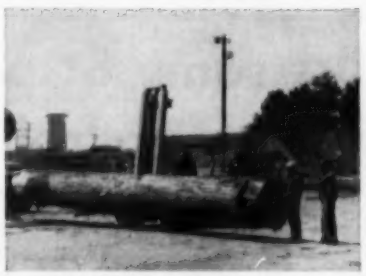
• Western Pine Prices

The following F.O.B. mill prices, based on Past Sales, were reported to the WESTERN PINE ASSOCIATION by members during

HYSTER® LIFT TRUCK METHODS ASSURE CAREFUL HANDLING OF VALUABLE 9½-TON CEDAR LOGS FOR EXPORTER

Unloading 9½-ton cedar log

Stacking



Moving logs to storage

Lifting empty trailer for "piggy back" ride

SAMOA, CALIFORNIA — Fairhaven Forest Products has developed procedures for efficient, yet protective handling of valuable cedar logs. A first grade Port Orford cedar log contains 2,500 feet, by Scribner scale, weighs an average of 9½ tons. To protect this investment in valuable cedar, each log must be handled as carefully as possible.

A fleet of Hyster 15,000 and 18,000 lb. capacity lift trucks (on pneumatic tires) provide the motive and lifting power for lifting logs off standard log trucks, transporting to the scaler station (where ends are trimmed and log cut to order), and to storage — where logs are often stacked as high as 15 feet. Hyster Lift Trucks operate on concrete surfaces or ungraded storage lot, unaffected by adverse weather, and are used to transport the logs to a dock for easy loading directly onto export vessels.

The Hyster Lift Truck also lifts empty trailer on log truck to "piggy back" trailer back to loading site, thus saving wear and tear on trailer.

Company officials state they have developed an effective handling system which has materially reduced overall operating costs.

Your Hyster Dealer makes it his business to keep up with materials handling progress in the lumber industry. Call him today. He may help you reduce your handling costs by as much as 80%!

Call your Hyster Dealer today. He is listed in your telephone directory under "Trucks-Industrial"

HYSTER COMPANY

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2954 N. E. Clackamas.....Portland 8, Oregon
1054 Myers Street.....Danville, Illinois
Hyster N.V. .....Nijmegen, The Netherlands
FACTORIES: Portland, Oregon; Danville, Illinois; Peoria, Illinois; Nijmegen, The Netherlands

the period 3/18/57 to 3/30/57 inclusive. Both direct and wholesale sales are included and are based on specified items only. They are for dry surfaced lumber.

PONDEROSA PINE

SELECTS S2 or 4S	4/4RW	5/4RW	6/4RW
C Select RL	$267.13	$268.38	$265.42
D Select RL	195.91	204.84	192.70
SHOP S2S	No. 1	No. 2	
5/4	134.10	102.05	
6/4	133.56	102.00	
COMMONS S2 or 4S	No. 2	No. 3	
1x8" RL	103.20	74.38	
1x12" RL	115.40	77.88	
4/4 No. 4 Common S2 or 4S	$3.87		

IDAHO WHITE PINE

SELECTS S2 or 4S	4/4RW	6/4RW
Choice (C) RL	275.50	
Quality (D) RL	213.63	259.18

	Colonial	Sterling	Stand.
COMMONS S2 or 4S	No. 1	No. 2	No. 3
1x8" RL		160.00	99.48
1x12" RL		166.00	100.06
4/4 UTILITY (No. 4) S2 or 4S RW&L	60.85		

SUGAR PINE

SELECTS S2 or 4S	4/4RW	5/4RW	6/4RW
No. 1 & 2 Clear RL	289.88	291.16	290.37
C Select RL	272.43	276.86	278.24
D Select RL	216.51	226.06	221.46
SHOP S2S	No. 1	No. 2	No. 3
5/4	142.78	105.78	71.36
6/4	140.74	105.07	69.63
8/4	159.44	112.05	72.65

LARCH-DOUGLAS FIR

4/4 No. 3 Common S2 or 4S	$58.91
2x4 No. 1 Dimension RW&L	80.50
2x4 No. 2&Btr. Dimension RW&L	70.61

British Columbia Log Market

Reported by C. D. Schultz & Co., Ltd., Vancouver, B. C., consulting foresters and engineers.
(Log prices are per thousand feet board measure.)

FIR — Log stocks down, demand steady for all grades. Price range $55.00 to $63.00 for No. 3's, $65.00 to $75.00 for No. 2's and $75.00 to $85.00 for No. 1's.

Peeler price weakening. Logs becoming difficult to move at upper limit of range. Price range $85.00 to $95.00 for No. 3's, $95.00 to $105.00 for No. 2's and $105.00 to $115.00 for No. 1's.

CEDAR — Log stocks continue to increase. Shingle cedar price range $35.00 to $45.00 for No. 3's, $45.00 to $55.00 for No. 2's and $55.00 to $65.00 for No. 1's. Lumber cedar price is $60.00 to $65.00 for No. 2's and $65.00 to $75.00 for No. 1's. Tie cedar price range $35.00 to $42.50.

HEMLOCK & BALSAM — Log stocks are steady and demand steady. Hemlock price range $40.00 to $45.00 for No. 3's, $45.00 to $52.50 for No. 2's and $52.50 to $57.50 for No. 1's. Balsam price is $35.00 to $42.50 for pulp and sawlog types with some sales of peeler type at $50.00 to $52.50.

• Southern Pine Prices (KD Stock)

		BB	C	D
Vertical Grain Flooring				
	1x4	205.00	200.00	195.00
Flat Grain Flooring				
	1x4	155.00	150.00	130.00
	1x6	175.00	165.00	125.00
Drop Siding				
	1x6 No. 106	191.00	170.00	130.00
	No. 116	191.00	170.00	130.00

Boards & Shiplap	1x6	1x8	1x10	1x12
No. 1	125.00	125.00	125.00	175.00
No. 2	82.00	84.00	81.00	93.00
No. 3	68.00	70.00	71.00	68.00

No. 1 Dimension	12	14	16	18	20
2x4	100.00	100.00	102.00	118.00	123.00
2x6	100.00	103.00	101.00	115.00	120.00
2x8	97.00	96.00	96.00	115.00	120.00
2x10	110.00	108.00	110.00	120.00	125.00
2x12	125.00	112.00	115.00	145.00	150.00

No. 2 Dimension					
2x4	94.00	96.00	98.00	107.00	113.00
2x6	86.00	88.00	86.00	100.00	105.00
2x8	84.00	85.00	84.00	97.00	105.00
2x10	88.00	91.00	88.00	105.00	109.00
2x12	90.00	88.00	90.00	115.00	120.00

Low-cost Chip Producer

HIGH QUALITY PULP chips are being made with this new Chipmaster chipper at the Van Handel Lumber Co., at Kernville, Ore. It is manufactured by Gabriel Boiler Co. and Portland Machinery Co., both of Portland, Ore. Features include: (1) quick knife changes via newly designed knife holder, (2) simplified, efficient 5-knife placement, reducing cutter blade requirements to a minimum, (3) one-piece anvil with positive locking and adjustment control and (4) rugged construction. This 48" 5-knife chipper can be arranged for either belt or direct drive. It is made for mills cutting up to 85M daily capacity.

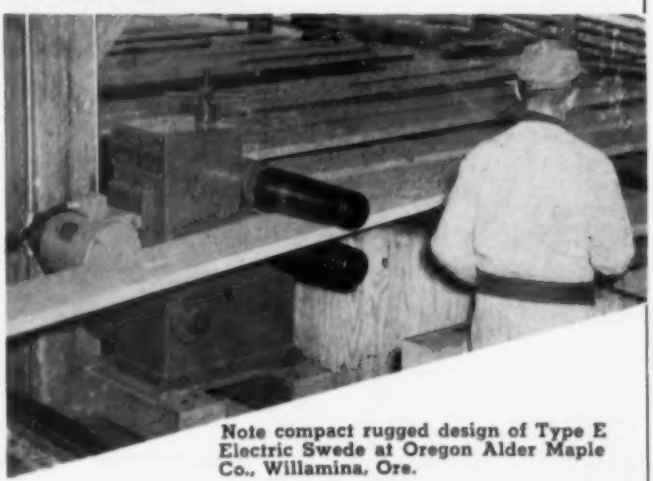
• Wood siding, when properly protected and used as exterior covering for a home, will wear down only about 1/32nd inch in 100 years, according to wood research specialists. Some woods, like western red cedar, when used as home siding and untreated with paints or varnishes, will last for decades without appreciable wear.

Would you like some 8c per hour help on your payroll?

That's exactly what the new Type E Moore Electric Swede costs per hour (including maintenance, depreciation and power.)

It is never late for work or off sick. It asks for no rest periods or complains of sore backs, tired muscles, heat or cold.

Wherever you want boards pulled from a chain or a sorting table you can use a Moore Electric Swede instead of a man—at only a fraction of the cost.



Note compact rugged design of Type E Electric Swede at Oregon Alder Maple Co., Willamina, Ore.

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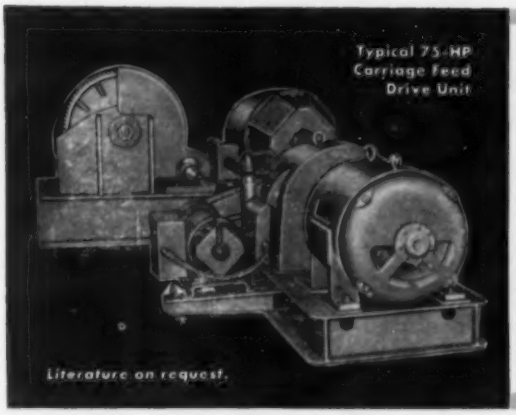

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Four Mills Join Program

(*Continued from page* 37)

nozzles at 1500 psi. Each pump is driven by an 800-hp G. E. motor. Western Gears connect the power with the pumps. Water carrying the bark is screened through three drum-type screens before it is dumped back into the Chehalis River. Bark is hogged and mixed with fuel.

Most of the logs going through the barker are 40 feet long. A scaler at the log deck has a pushbutton panel which controls the entire conveyor system and barker. The company also has a Bellingham barker for eight-foot logs in the stud mill.

CONVEYOR BELTS CONVERGE on a central hopper over the chipper, thus bringing chip material from all sources in the mill. An overhead push-button panel installed by Industrial Components, Inc. permits chipperman Marvin Hovis to control movement throughout the department. Control by the two dozen buttons includes the flow of material before and after chipping and the movement of cars being loaded.

The final conveyor belt passes over a large wheel before dropping material into the chipper. This wheel contains a metal detector which stops everything should a piece of metal show up. Chipper is a Norman Model 66, powered by a 300-hp G. E. motor.

Screened out overs go through a small Norman rechipper. Funneled to a Rader Pneumatic, chips are blown to railroad cars or to the truck-loading bunker. Carloads go to Rayonier at Shelton. Truckloads go to Rayonier at Hoquiam as described above.

Lumbermen's Underwriting Alliance Holds Session

• The semi-annual meeting of the advisory committee of the Lumbermen's Underwriting Alliance, Kansas City, Mo., was held in Portland, Ore., late in March at which time the group's activities in 1956 were reviewed.

In attendance were committee members and executives of Epperson Underwriting Co., manager for Lumbermen's Underwriting Alliance, headed by E. M. Lynn, president of Epperson. The session was held coincident with the annual meeting of the West Coast Lumbermen's Association.

The past year was described as a good one, even though fewer premiums were written and more losses sustained than in the previous year. The loss ratio in 1956 was 47.7%, the savings to subscribers 31.8%. A five-year average shows these ratios at 43.05% on losses, 34.71% on savings to subscribers.

Chairman of the advisory committee is M. L. Fleishel, president of St. Joe Lumber & Export Co., Port St. Joe, Fla. Members include Frederick H. Dierks, Dierks Lumber & Coal Co., Kansas City, Mo.; W. B. Harris, The Williams & McKeithan Lumber Co., Lynchburg, Va.; Paul V. Eames, McCloud River Lumber Co., McCloud, Calif.; E. L. Kurth, Angelina County Lumber Co., Keltys, Tex.; N. F. McGowin, W. T. Smith Lumber Co., Chapman, Ala.; J. D. Leland, Long-Bell Division, International Paper Co., Longview, Wash.; J. W. Watzek, Jr., Crossett-Watzek-Gates, Chicago, Ill.; R. B. White, Exchange Sawmill Sales Co., Kansas City, Mo.; Aytch P. Woodson, Rib Lake Lumber Co., Waussu, Wis.; Walter Johnson, American Forest Products Corp., San Francisco, Calif.; C. Howard Crawford, Pine Products Corp., Prineville, Ore.

• It is estimated that 51 percent of 54 million U. S. homes are more than 30 years old. Since more than 95 percent of these homes have been built of wood, they lend themselves ideally to remodelling and modernization. It is easy to move or remove walls of wood, or to change the outer appearance of wood framed homes to conform to modern style trends.

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PROMINENT at the annual meeting of the Canadian Institute of Timber Construction in Vancouver, B. C., were, left to right: H. M. Paterson, general chairman construction committee; R. F. DeGrace, executive vice president; D. M. Hungerford, sales engineer, wood preserving division CITC.

Institute of Timber Construction Meets

DESPITE RISING COSTS and intensive competition from other building materials, timber has a bright future in industrial construction, especially if research keeps pace with the times.

This was one of the contentions of speakers before the fourth annual meeting of the Canadian Institute of Timber Construction held in Vancouver, B. C., March 25-28.

The experts who gave their views to the delegates emphasized that increasing markets for structural timber would depend on continuing success in the field of chemical preservatives and lamination; that the time had passed when timber in its natural state could be depended on to win and hold markets. And they also stressed the importance of keeping production costs down.

"Experience being gained every day by the young timber fabricating industry, the new equipment and new processes being developed, will no doubt result in additional economy," declared T. A. Eldridge, Laminated Structures, Ltd. "Research by the chemical industry into new adhesives may produce startling results. If, for example, an adhesive could be developed which would bond steel to timber permanently under all exposure conditions, it would have far-reaching effects.

"Much remains to be done in development of structural timber framing systems, such as rigid frames, continuous structures and the application of cantilever beam systems to roof framing. Experiments are being made by the Forest Products Laboratory of Canada to determine the possibility of pre-stressing, or rather post-tensioning, glulam beams by means of high tensile steel cables."

E. A. Thompson, vice president and general manager, Canada Creosoting Co., Montreal, was re-elected president. Directors include B. C. Morton, fabricating; D. E. Ness, W. K. Nichols.

THE C.I.T.C., as President Thompson explained at the opening session, is a Canada-wide, non-profit organization whose purpose is to serve the timber construction industry in Canada, by:

- Originating, assembling and disassembling information on use of structural timber and the pressure treatment of wood products with preservatives and fire retardants.
- Preparing and recommending proper standards and specifications.
- Acting on building codes and various specification authorities to insure proper consideration for the use of timber construction and pressure treated products.
- Promoting advancement of knowledge of timber construction and pressure treatment of wood products through educational bodies, and research organizations.

Highlights from papers delivered:

Prof. F. Lasserre, University of B. C.: "Apparent trend is towards greater use of our modern mass-production technology in construction of houses. At the same time we are not likely to accept loss of attractiveness and human qualities. A combination of post, beams, panels and service cores in a modular setting would seem to be the prevailing direction. As the Japanese as well as our own architects have demonstrated, this type of construction can be thoroughly attractive and capable of giving us a maximum sense of space. Planning of our cities and trends in social and family values may (otherwise) lead us into future cities of trailer camps."

P. Christofferson, consulting engineer: "Although the glue-laminated industry is still relatively small compared to other building products industries, it is steadily gaining ground. Production today is about three times what it was ten years ago. As volume increases, new and improved fabrication methods are developed to make the product more competitive. The industry will undoubtedly make efforts to find many new uses for glulam.

"In general, timber construction is most economical type of construction for small spans, at least here on west coast. When spans increase and sawn timber becomes uneconomical, glue-lam takes over until the spans are so long that other materials prove more economical. As the supply of heavy sections in sawn timber will become more difficult, cost will go up, and lower limit for the use of glue-lam will come down. Glue-lam beams have been used for spans over 100 feet, and trusses and arches have exceeded 200 foot spans."

W. K. Nichols, Timber Preservers Ltd.: "The Canyon bridge near Nanaimo, B. C., built in 1932, has justified claims that pressure treatment provides timber structures of lowest annual cost, that pressure treatment means maintenance costs are low and that changing conditions and rapid obsolescence in highway construction place a premium on materials of high salvage value (such as pressure-treated timbers)."

A. D. Kerr, Timber Preservers Ltd.: "We suggest that timber design be tailored to actual end use requirements, and that users and buyers should become more familiar with the physical properties of coast woods and standard trade practices in order to properly and economically use them to best advantage."

Technical Director Named

• George G. Hazell, Washington, D. C., has been appointed to the newly created position of Technical Director of the Prefabricated Home Manufacturers' Institute.

Hazell will be responsbile for the technical and research activities of the Institute, including work concerning construction standards for prefabricated houses, building codes and FHA-VA relations. In addition, he will be PHMI's liaison with its two technical committees — the Design, Engineering and Research Committee and the Development Committee.

Pulp Plans Announced

• Powell River Co., Vancouver, B. C., which recently negotiated for acquisition of control of Brooks-Scanlon, Inc., at Bend, Ore., expects to build a paper mill in the Bend area before end of this year. The big British Columbia newsprint, pulp and lumber manufacturer reported net sales of $74,000,000 last year, compared with $71,400,000 in 1955, but near earnings were down from $12,900,000 to $10,900,000 owing to higher costs of production, slump in lumber markets and high discount on U. S. funds.

• Plywood manufacturing started in Oregon. In 1904 a box and barrel factory in St. Johns made the first panels.

Showing Pressed in Ball Bearings

NOW! Ball Bearing Roll Top Chain

Portland Chain's PORTALLOY roll top provides the easiest transmission to speed up your lumber handling.

PORTALLOY roll top is available in rubber covered chain for handling select grades . . . or critical inspection.

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PORTALLOY Roll Top Chain

B. C. Operators Become Grade Conscious

• Sawmill operators throughout the British Columbia interior are becoming more grade-conscious.

This was emphasized at the recent annual meeting of the Interior Lumber Manufacturers at the Prince Charles Hotel in Penticton, attended by about 60 delegates representing approximately 90% of the industry in that widespread area.

Gus Ericksson, Knight Lumber Co., Crowsnest, was re-elected as president, with L. E. (Vern) Vance, of Kootenay Forest Products, vice president. The entire executive staff was returned to office with the exception that Warren Larson of Bell Pole Co. replaced V. C. Brown, Crestbrook Timber. Other executive members are: Dennis Brooks, Celgar; H. A. McDiarmid, Lumby Planing Mills, Lumby; Walter Justad, Cranbrook Cartage, Cranbrook; Art Lloyd, Federated Co-operative, Canoe; J. W. Munsie, Kettle Valley Lumber Co., Princeton; Henry Nelson, Galloway Lumber Co., Galloway; H. B. Simpson, S. M. Simpson, Ltd., Kelowna; B. Neville Smith, Creston Sawmills, Creston; James White, East Kootenay Lumber Co., Fernie; F. W. Kirkland, Lumby Timber Co.; C. G. McMynn, Boundary Sawmills, Midway.

Grade marking will be under way this year on an association basis, and trials are now being made. The association will continue its educational program, and about 480 will take examinations this spring.

Among the guests were Dr. C. D. Orchard, deputy minister of forests and chief forester, and Philip J. Boyd, Chicago, president of the National American Wholesale Lumber Association. Mr. Boyd explained the impact of tight money on the housing and lumber industries and said that the present situation was developing a big backlog of business that would eventually materialize, although immediate prospects might not be favorable.

William Clark, Toronto, of the PLIB, reported on the re-inspection service inaugurated in Eastern Canada which is being supported by the association. Ernie Cowan, safety director of the association, presented a program on safety presided over by Dennis Brooks.

Emil Lehman, chief supervisor of PLIB in the B. C. district, Ken Reid and John Stokes of the B. C. Forest Service were also prominent in the convention program.

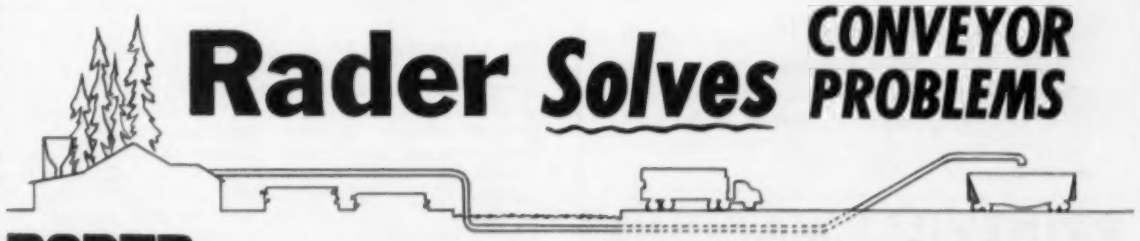
• Although the log cut was higher than ever in British Columbia last year, total value of forest production showed a decline for the first time since 1952. Forests Minister Ray Williston announced that the industry's output was estimated at $628,586,963, or $3,112,592 less than in 1955. Volume of production was higher in almost every category, the slump in value being due to decline in lumber prices. Total cut was 1,068,733,441 cubic feet, an increase of 34,753,708 over 1955. Douglas fir accounted for 89 percent of the total cut, followed by hemlock at 20 percent. Spruce passed red cedar for the first time on record.

J. E. HAWKINS MILLWORK has purchased a G-16 Newman head grinder.

THE EDO LUMBER CO., Leggett Valley, Calif., is completing mechanization of their Mater automatic deck and Mater riderless carriage by installing a Mater log stop and loader. Owner Ed Omernick is also taking delivery on a new Newman planer model M-500.

Owned by Jack Harris, REDDING FOREST PRODUCTS, Redding, Calif., is a 20-ft. Idaco planing mill trimmer. A unique feature is its ability to trim either studs or double trim lengths up to 20-ft. in two-ft. spacings.

Rader Solves CONVEYOR PROBLEMS



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Rader Pneumatics, Inc. 1739 N. E. 42nd Street Portland 13, Oregon ATlantic 2-7767

School Will Dedicate New Research Lab

• State University College of Forestry at Syracuse University, Syracuse, N. Y., will dedicate its new three-and-three-quarter-million-dollar Hugh P. Baker Laboratory building for education and research in forest products on May 2-3, with two-day ceremonies scheduled to commemorate the occasion.

The new, four-story, L-shaped structure provides the College of Forestry with the physical equipment needed for research and education of students planning to enter the wood products fields.

The Departments of Forest Utilization, Wood Technology and Forest Chemistry will be housed in Baker Hall, as well as the newly organized Cellulose Research Institute.

Canadian Western Makes Mill Changes

Important changes have recently been effected at the big Fraser Mills sawmill operation of Canadian Western Lumber Co., subsidiary of Crown Zellerbach Canada in recent months to bring about greater efficiency and higher production.

A feature has been the installation of two riderless carriages, biggest in British Columbia. They were built to the company's own engineering specifications by Heaps Engineering at New Westminster, with electrical controls supplied by Salem Machine Works. The carriages can accommodate logs 40 feet in length, lifted onto the mill floor from the pond by a three-section haul.

A new Filer & Stowell nine-foot bandmill saws the logs riding on one of the riderless carriages, and an Allis Chalmers nine-foot bandmill accommodates the other.

Before the new system was installed a setter and dogger were employed as well as a sawyer. In the new operation each carriage requires the services of a single sawyer and no one else. It is expected that the cut on one bandmill will be as much as 200,000 feet daily, on the other 150,000 feet.

A Sumner hydraulic edger with Durand hydraulic setworks is another new installation at this thoroughly modernized mill, one of the biggest producers on the Pacific coast.

Main phase of construction was under Len Dotto, plant engineer, and Master Mechanic John Hoyem.

Two Nicholson barkers are being installed, one 60-inch and the other 50-inch. Four chippers will soon be serving the mill—Hansel, and Sumner units.

Housing Slump Cited

• Tight money has resulted in a big reduction in home building in Canada and in lumber sales, G. D. Ecott, vice president and secretary of MacMillan & Bloedel, told a Vancouver Board of Trade meeting recently. "British Columbia is more vulnerable to tight money than any other province due to our heavy dependence on the lumber industry," said Mr. Ecott.

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Philippine Lumber Producers Meet

• Annual meeting of the Philippine Lumber Producers Association was held in Manila on March 15. Henry S. Thompson, president, Insular Lumber Co., biggest lumber concern in Philippines, is shown at speaker's stand. Others, left to right, are: A. de las Alas, re-elected for 8th consecutive time as president of association; H. C. Pope, general manager, Insular Lumber Co., and 1st vice-president of association; Gaudencio E. Antonino, president and general manager, Western Mindanao Lumber Co., and director of association; Juan S. Versoza, manager, Anakan Lumber Co. and Nasipit Lumber Co. Other officers elected for 1957 were, Carlos P. Fernandez, 2nd vice-president, Nasipit Lumber and Anakan Lumber Co.; Pacifico de Ocampo, secretary-treasurer and counsel. Other directors are: Florencio Tamesis, manager, Anakan Lumber Co.; Jose G. Bonoan, manager, Taggat Sawmill Co. and Dingalan Forest Products Corp.; Manuel Diaz, general manager, Sta. Clara Lumber Co.; Albin Jacobson, president, Lianga Bay Logging Co., Inc.; Nicolas Capistrano, Jr., president and general manager, Misamis Lumber Co., Inc.

News of Suppliers

- **Promotions**
- **Appointments**
- **Plant Expansions**
- **Mergers & Acquisitions**

• Yale Materials Handling Div., Yale & Towne Mfg. Co., announces appointments of ***Robert L. Brown*** as sales manager of gasoline and LP-Gas powered industrial trucks and ***Charles E. Howard*** as sales manager for electric powered trucks and truck attachments.

• ***Del J. Stoker,*** manager of North Pacific Division, Armco Drainage & Metal Products, Inc., has been made a vice president of the firm. His headquarters are in Portland, Ore.

• New general manager for marketing for Reliance Electric & Engineering Co. at Cleveland is ***Richard A. Geuder.*** Reporting to Mr. Geuder is newly appointed sales manager, ***Carl V. Gregory.***

• ***Harold Rosoff*** is the newly named sales manager for Ledeen Mfg. Co., El Monte, Calif., manufacturers of valves, cylinders, valve actuators and air-hydraulic pumps and boosters.

• ***Standard Equipment Sales,*** Seattle, is a new distributor for Ledeen Mfg. Co. products.

Reichhold Opens Plant

MOST RECENT of Reichhold Chemicals, Inc.'s world-wide network of plants is the new formaldehyde producing plant at Tacoma, Wash. Attending the formal opening activities were these RCI officials (L to r): H. O. WARNER, Seattle-Tacoma plant manager; E. M. SKYTTA, district manager Seattle-Tacoma; CHARLES J. O'CONNOR, chairman of the board; and M. W. REECE, San Francisco, vice president in charge of Pacific coast operations. In addition to formaldehyde, the Tacoma unit, which operates under the Seattle district, also produces pentachlorphenol and dry glue.

• New Norton appointees are ***Norman R. Ekholm,*** district manager in Atlanta, and ***John R. H. Truelsen,*** who fills a similar post in Indianapolis. These two new offices have been established to provide better service in supplying grinding wheels, abrasive products and engineering. Both are 10-year veterans with Norton.

Named for Coast Posts

THE OILGEAR CO., manufacturers of application-engineered fluid power equipment for industry, announces these appointments for the west coast: CARL L. GOSEWEHR (L), district manager of Oilgear Pacific coast offices located in Los Angeles and Seattle, a post formerly held by E. H. PARDUHN, who has been transferred to Buffalo as manager of a new territory office in that city; and ROLAND C. HURTIENNE (r), new district manager at Seattle. Mr. Gosewehr has been with Oilgear since 1949 and has gained experience in many capacities. Mr. Hurtienne is a mechanical engineer graduate of Wisconsin and a former lieutenant in the naval air branch and has been with Oilgear for several years.

• R. G. LeTourneau announces a new distributor for industrial hoists and jib cranes: ***Hallidie Machinery Co.,*** Spokane, Portland and Seattle.

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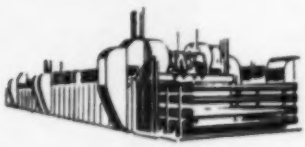

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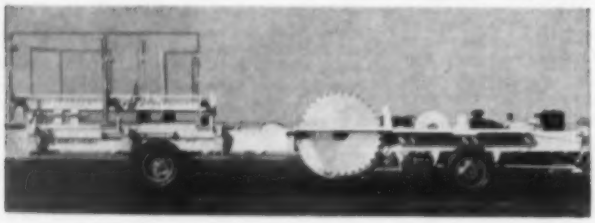

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NOW MANUFACTURED in the U.S. is the Bachmobile portable sawmill, mounted on a rubber-tired trailer. The Eugene Truck & Machine Co., Eugene, Ore., is handling the production. There are a great many of these operating in British Columbia, where they originated. From his platform facing the exposed side of the log, the sawyer controls the carriage, setworks, log turner and air dogs by means of electrically operated solenoids activating air valves. The complete machine includes carriage, edger, power unit, compresser, roll cases and blower. With a six-man crew this mill produces 30M bd. ft. per shift.

RICHARD L. HENDERSON has been appointed sales engineer for Western Machinery Corp., Portland, Ore., distributors of power transmission products. Mr. Henderson will handle sales in the western part of Oregon.

• ***H. S. Cain*** has been appointed district sales engineer for Berry Hydraulics division of Oliver Tyrone Corp. Mr. Cain will cover Texas and assist division sales engineers throughout the south.

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Caldwell Machinery Co., Portland, Ore.
Ledeen Mfg. Co., Los Angeles, Calif.
John M. O'Brien Co., Portland, Ore.

AIR MOTORS
Gardner-Denver Co., Quincy, Ill.
Salem Equipment & Supply Co., Salem, Ore.

APPRAISALS
General Appraisal Co., Seattle, Portland, San Francisco

ARCHES
Hyster Company, Portland, Ore.

AXLES
Clark Equipment Co., Buchanan 8, Mich.
Eaton Manufacturing Co., Cleveland, Ohio
Roberts Motor Co., Portland
Timken-Detroit Axle Co., Detroit

BAND WHEEL GRINDING
Wilder Saw Works, Fresno, Calif.

BARKERS, LOG
Sumner Iron Works, Everett, Wash.
Nicholson Manufacturing Co., Seattle
Soderhamn Machine Mfg. Co., Portland, Ore.

BEARINGS
Chain Belt Co., Seattle, Portland, San Francisco
Dodge Manufacturing Co., Mishawaka, Ind., San Francisco, Portland, Seattle
Link-Belt Co., Seattle, Portland, San Francisco
J. W. Minder Chain & Gear Co., Portland, Los Angeles

BELTING AND PACKING
Gates Rubber Co., Denver
J. W. Minder Chain & Gear Co., Portland
Raybestos-Manhattan, Inc., Passaic, N.J.; Portland, Seattle
U. S. Rubber Co., Mechanical Goods Div., New York

BLOWPIPE SYSTEMS
American Sheet Metal Works, Portland
Anderson Blowpipe Mfg. Co., Seattle
Archer Blower & Pipe Co., Portland

BLUE PRINTING
Chas. Bruning Co., Inc., Portland

BOILERS AND ACCESSORIES
Gabriel Boiler & Fabrication Co., Portland
Seattle Boiler Works, Seattle

BOILER WATER—Treatment
Coast Neutralizer Corp., Portland, Ore.

BOOMS—Loading
Eugene Truck & Machine Co., Eugene, Ore.

BOOM BOATS
L. S. Baier & Associates, Portland
Gunderson Bros. Engineering, Portland
Nichols Boat Works Co., Hood River, Ore.

BURNERS—Refuse
Phelps Brothers, Inc., Eugene, Ore.

CARRIAGES—Riderless—Automatic
Corley Mfg. Co., Chattanooga, Portland, Little Rock
Filer & Stowell Co., Milwaukee, Wis.
Forest Products Machy. Corp., Salem, Ore.
I. W. Johnson Engineering Co., Tacoma
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Monarch Forge & Machine Wks., Portland, Ore.
Peters Co., Portland, Oregon
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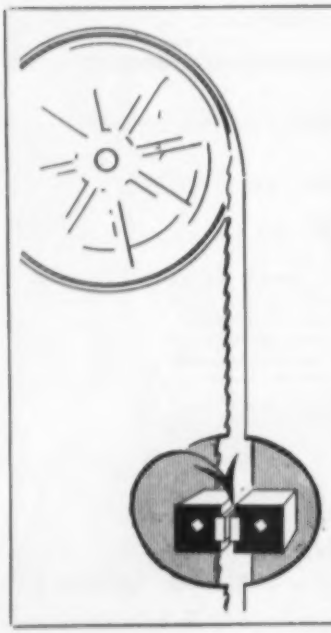

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Moline Malleable Iron Co., St. Charles, Ill.; Tacoma, Wash.; Seattle, Portland, Los Angeles
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Carthage Co., Carthage, N. Y.
Soderhamn Machine Mfg. Co., Portland Ore.

CAR CONTROLS—Automatic
Industrial Components, Inc., Beaverton Ore.

CRANES—Overhead
Ederer Engineering, Seattle
Harnischfeger Corp., Milwaukee, Wisc
Berger Engineering Corp., Seattle

CRANES AND SHOVELS
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Insley Mfg. Co., Indianapolis, Ind.
Link-Belt Speeder Corp., Chicago, Ill., Seattle, Portland, San Francisco
Northwest Engineering Co., Chicago Seattle, Portland, San Francisco
Manitowoc Engineering Co., Manitowoc Wisc.
Unit Crane & Shovel Corp., Milwaukee Wis.
Unit Shovel Co., Milwaukee, Portland Seattle.

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Jones & Orth, Seattle, Wash.

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Salem Equipment & Supply Co., Salem Ore.

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Zidell Machinery & Supply Co., Portland, Ore.

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Cummins Engine Co., Columbus, Ind.; Portland, Seattle

General Motors, Detroit, Seattle, Portland, Stockton, San Francisco, Los Angeles
Gunderson Bros. Engineering, Portland, Ore.
International Harvester Co., Chicago, Portland, Seattle, San Francisco
Precision Engineering Co. of Sacramento, Calif.
Waukesha Motor Co., Waukesha, Wisc., Seattle, Portland, Ore., San Francisco, Los Angeles

ENGINES—GAS

Ford Motor Company, Industrial Engine Division, Dearborn, Mich.
Chrysler Industrial

ENGINEERS—FORESTRY & MILL

Columbia Pacific Corp., Portland, Ore.
D. E. Collinson, Milwaukie, Ore.
Industrial Development Co., Tacoma
Production Management Engineering Association, Portland, Los Angeles, San Francisco
W. H. Rambo, Portland
K. B. Wood & Assoc., Portland

ENGINEERS—INDUSTRIAL

Production Management Engineering Association, Portland, Los Angeles, San Francisco

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"Sunbo" Mill Engineering & Supply, Seattle
National Machinery Sales, Gold Hill, Ore.
Portland Machinery Co., Portland
Schnitzer & Wolf Machinery Co., Portland, Ore.
Soderhamn Machine Mfg. Co., Portland, Ore.
Star Machinery Co., Portland, Seattle
Western Steel & Supply Co., Dallas, Ore.

GEARS AND GEAR MOTORS

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GLUES

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MOULDERS

4" Yates C-88 heavy duty, DMD, ball bearing
6" Woods 147-M electric moulder
8" Hermance b.b., 15 HP motor, starter, heads, hoods
8" Vonnegut all electric, jointers, hoods, heads
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12" Vonnegut all electric, heads, hoods

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The Oilgear Co., Milwaukee, Wis., Los Angeles, Seattle

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Moore Dry Kiln Co., No. Portland

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C. M. Lovsted Co., Seattle, Portland, San Francisco
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Ohio Knife Co., Cincinnati, Portland, Seattle, Los Angeles, Oakland, Vancouver, B.C.
Simonds Saw & Steel Co., Fitchburg, Mass., Seattle, Portland, San Francisco
Ray Smythe, Portland

KNIFE GRINDING MACHINERY
Hanchett Manufacturing Co., Big Rapids, Mich., Portland

KNOT SEALERS
Western Machinery Corp., Portland, Ore.

LEASING MACHINERY
Ray Parker Machinery Sales Co., Portland, Ore.

LOADBINDERS
American Logging Tool Corp., Seattle, Portland, San Francisco, Los Angeles
Atkins Saw Div.—Borg - Warner Corp., Indianapolis
Thomas Laughlin Div., Portland, Maine
Lebus Rotary Tool Works, Longview, Texas

LOANS
Doug Gerow Finance Co., Portland, Ore.

LOGGING BLOCKS, SUPPLIES AND TOOLS
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Electric Steel Foundry Co., Portland, Seattle
Eugene Equipment Co., Eugene, Ore.
Howard-Cooper Corp., Portland, Seattle
Skookum Co., Inc., Portland
Washington Iron Works, Seattle

LOG LOADERS (Also See CRANES)
R. G. LeTourneau, Inc., Longview, Texas
Washington Iron Works, Seattle
Skagit Steel & Iron Works, Sedro-Woolley, Wash.

LOG STACKERS
R. G. LeTourneau, Inc., Longview, Texas

LOGGING TRAILERS
Trailmobile Co., Cincinnati
Reliance Truck & Trailor Co., San Francisco

LUMBER CARRIERS AND LIFT TRUCKS
Gerlinger Carrier Co., Dallas, Ore.
Hyster Co., Portland, Seattle
Clark Equipment Co., Ross Carrier Line, Portland, Seattle, San Francisco

LUMBER FINANCING
Douglas, Guardian Warehouse, Corp., New Orleans, Portland, Los Angeles, San Francisco

LUMBER STACKERS, UNSTACKERS, LOADERS AND HOISTS
C. M. Lovsted & Co., Inc., Seattle
Moore Dry Kiln Co., Vancouver, B. C., Brampton, Ont., Jacksonville, Fla., North Portland
Stetson-Ross Machine Co., Seattle

Yale & Towne Lift Truck Plant Opens on W. Coast

• The new west coast materials handling plant at San Leandro, Calif., opened by Yale & Towne Mfg. Co., is producing a completely new line of Yale heavy duty gasoline fork lift trucks with load capacity up to 20,000 lbs.

The $2½-million plant also produces complete lines of the standard Yale gas, LP-gas, and electric-powered fork lift trucks, Worksavers and Warehousers.

A wide variety of lift truck attachments will also be manufactured at San Leandro. Also, a major factory distribution center for replacement and service parts for the west will be established.

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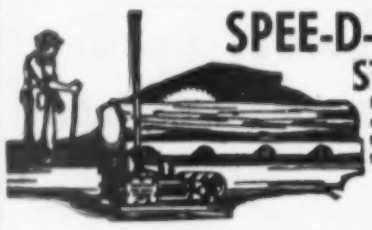

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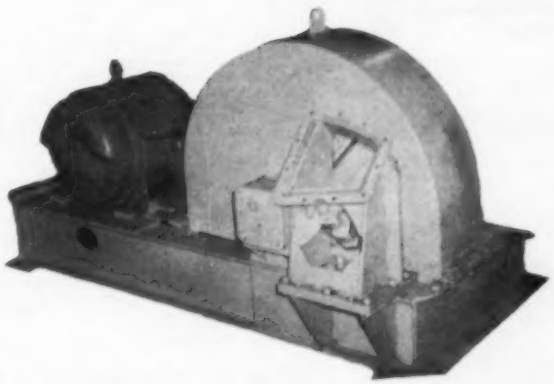

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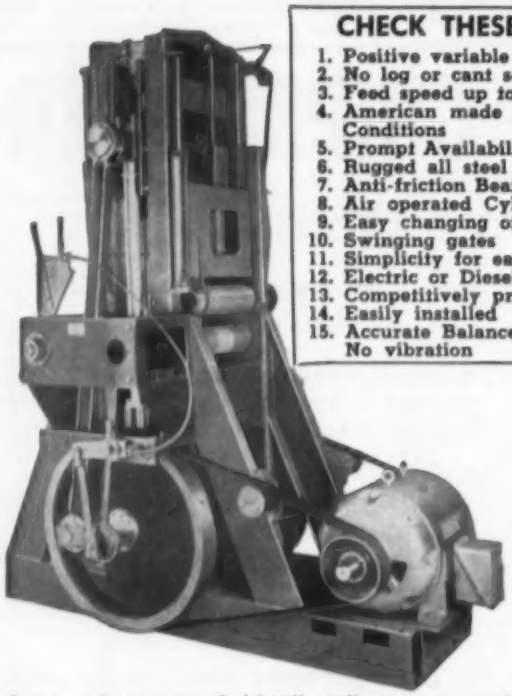

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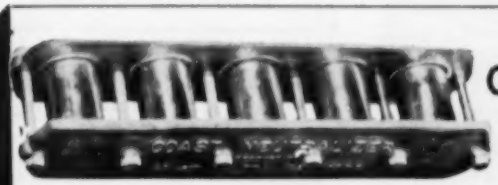

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Complete lumber set up consisting of two mills, resaws and gang mill, dry kilns, modern planer, yards and sheds, logging equipment, etc. Year around operation with plenty of available timber. Production in excess of 100M daily. Located on main highway and railroad. Write TL Box 161, c/o THE LUMBERMAN, 519 S. W. Park Avenue, Portland 5, Oregon.

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Two or three man sawmill and planer. Property, Buildings, two trucks, good log supply. 75% business custom sawing and planing—balance Retail. Immediate sale all slab wood & sawdust. Only mill in town of 8500 Pop. Northwest Washington. Established 9 years—$7500.00 plus inventories. Write TL Box 162, c/o THE LUMBERMAN, 519 S. W. Park Avenue, Portland 5, Oregon.

AVAILABLE

Sawmill office manager - accountant. Experienced in labor relations and management field. 25 years in lumber industry. My employer for past 15 years has liquidated. Present age 43. Excellent references. Write TL Box 164, c/o THE LUMBERMAN, 519 S. W. Park Avenue, Portland 5, Oregon.

BUYERS GUIDE and CLASSIFIED SECTION

Be sure to read the latest FOREST INDUSTRIES NEWS section in each issue of THE LUMBERMAN.

FOR SALE

1—G K Straight Wheel Knife Grinder. 38" Acme Bar, Complete with 2 motors. Good condition. Price $800.00.

WILDER SAW WORKS
2520 Ventura Ave., Fresno 1, California
Phone: Day - ADams 7-1486; Night - BAldwin 7-6545

STAR VALUES

PLANERS—MATCHERS & MOULDERS

Used Model 404CM Woods 6" x 19" planer-matcher, all electric, ball bearing, 8-knife, feed table, blower.
New Newman M-512 8" x 16" planer-matcher, 8-knife, ball and roller bearing.
New Newman M-510 6" x 14" planer-matcher, 6-knife, ball and roller bearing.
Used Newman M-48 6" x 16" planer-matcher, 4-knife, ball bearing.
Used Berlin No. 94, 6" x 15" planer-matcher, 6-knife.
Used Vonnegut 4" x 6" electric ball bearing moulder.
Used Woods No. 134BM 4" x 10" 5 head electric moulder, ball bearing, lag bed.

FILING ROOM EQUIPMENT

New Newman G-232 hydraulic knife grinder.
New Newman G-132 straight knife grinder.
New Newman G-16 sidehead grinder.
New Newman G-71 sidehead grinder.
New Acme circular saw sharpener.

BAND RESAWS—BAND RIP SAWS

Used E-48 Turner 48" vertical band resaw, left hand.
New E-52 Turner 52" vertical band resaw, left hand.
New E-42 Turner 42" vertical band resaw, left hand.
Rebuilt Fay & Egan 60" vertical band resaw, left hand, anti-friction bearings.
Used McDonough 44" vertical band resaw, left hand.
Used R-42 Turner twin 42" band resaw, ball bearing, two 25 HP motors, two HP variable feed.

SAW MILL EQUIPMENT

Rebuilt PSMD No. 2 (No. 45) hog, roller bearing.
New Diamond No. 135 hog.
New Schurman 6" x 54" stub edger, L.H.
Used Sumner 8" x 54" stub edger, L.H.
New Miner 4" x 30" table edger, L.H.

WOODWORKING MACHINES

Used Yates 42" bandsaw, ball bearing, for shakes.
Used G. M. Diehl No. 75 glue joint straight line rip saw, ball bearing.
Used No. 120 Greenlee 8" x 36" double surfacer, ball bearing, direct connected.
New G. M. Diehl No. 750 glue joint straight line rip saw.
Used Whitney No. 32 6" x 30" single surfacer, ball bearing, direct motor drive.
Used Newman No. 600 24" x 8" single surfacer, 5 HP, ball bearing.
New Newman S-830 30" x 8" single surfacer, 7½ HP.
Used Model LRS California self feed ripsaw, ball bearing, 20 HP.
Used Model 22-D Black Bros. 50" double glue spreader, motorized.
Used Model C-5 Black Bros. 80 gal. glue mixer.

STAR MACHINERY COMPANY

SEATTLE	SPOKANE	PORTLAND	MEDFORD
241 Lander Street	E. 415 Sprague Ave.	801 S.W. Front Ave.	139 South Fir St.
ELliott 0760, Ext. 15	Riverside 7-6121	CApitol 8-7395	Medford 3-1800

Good Used Machinery

Bargain Prices — Everything Goes

1—64" Yates BB Band Resaw, 7 hp - 4 hd. blk. line bar hydr. set, 65 hp motor, V-belt drive floor and breakdown chains, off bearing belt, 8 blades.

1—77A, 6x15 Am. 6K, rd. hd. planer dbl. pineapple feed table, 75 hp 1200 rpm motor, floor, breakdown and transfer chain to feed table, side heads, 1—54", 60 hp blower and 120 ft. pipe, 1—70' 4—H78 chain sorting table, 5 hp, 18 rpm spur gear reduction drive.

Grinding room equipment, No. 36 Issington trim saws, 2—H78 chain conveyors with gear motors and drives.

Gear reducers for all transfers, starters, disconnect switches, gutters, conduit and wiring.

1—½ yd. Osgood crane—30' boom.
1—Three drum donkey and rigging.
1—52 Gerlinger fork lift.
1—50 hp, 275 C.F.M. Compressor.

New: 2-Man operated—20 to 30 M capacity, Diesel-Electric Portable Skrag type mill on wheels—Air and Hydraulic operated. "If you need a portable stud and tie mill you shouldn't pass this one up."

Write, wire or phone

Caldwell Machinery Co.

EXPERIENCE - SERVICE - ECONOMY
738 N.W. Glisan St., Portland 9, Ore.
CA 8-1565 and CA 6-3568 Res. NE 6-4454

ALBANY LINEBAR

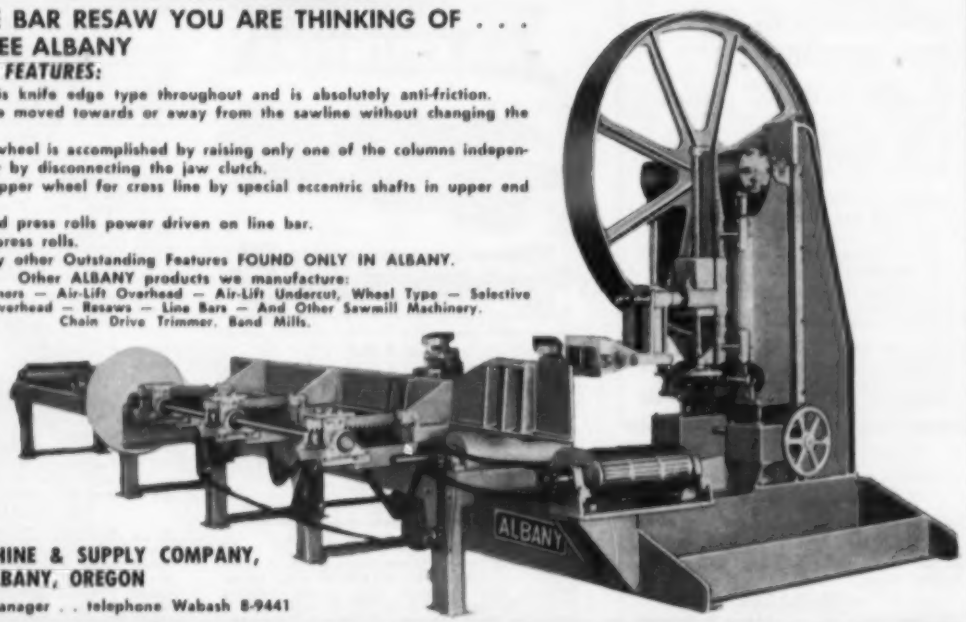
THE BEST FOR LESS

IF IT'S A LINE BAR RESAW YOU ARE THINKING OF . . . BE SURE TO SEE ALBANY

OUTSTANDING FEATURES:

- **Straining device is knife edge type throughout and is absolutely anti-friction.**
- **Top wheel can be moved towards or away from the sawline without changing the strain ratio.**
- **Tilting of upper wheel is accomplished by raising only one of the columns independent of the other by disconnecting the jaw clutch.**
- **Adjustment for upper wheel for cross line by special eccentric shafts in upper end of column.**
- **Colemon feed and press rolls power driven on line bar.**
- **Air pressure on press rolls.**
- **. . . . and many other Outstanding Features FOUND ONLY IN ALBANY.**

Other ALBANY products we manufacture:
Random Length Trimmers — Air-Lift Overhead — Air-Lift Undercut, Wheel Type — Selective & Automatic Overhead — Resaws — Line Bars — And Other Sawmill Machinery. Chain Drive Trimmer. Band Mills.



ALBANY MACHINE & SUPPLY COMPANY, ALBANY, OREGON

Re'no Fritz, manager . . telephone Wabash 8-9441

MacMillan Appoints Execs.

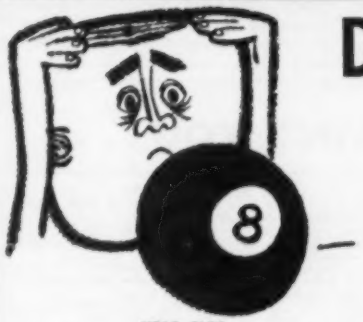
• Several top-level executive appointments have been announced by President H. S. Berryman, MacMillan & Bloedel, Vancouver, B. C.

Ian S. Brand, formerly manager western district sawmills, has been named general manager of that division, succeeding G. S. J. (Gary) Bowell, now vice president, pulp and paper. Harold D. Dagg, one of the original employees of the Vancouver plywood division when the mill was built in 1935 and recently logging manager for the eastern district at Nanaimo, has been appointed general manager, operations eastern district, excluding pulp and paper.

Other appointments: F. W. Fearman, formerly manager Chemainus division, as manager, western district sawmills; H. R. D. Chisholm, formerly manager Kennedy Lake division, as eastern district logging manager; Bryce P. Page, formerly manager of Northwest Bay division, as manager, Chemainus division sawmill; Glen W. Hall, formerly manager Menzies Bay division, as manager of Northwest Bay, Iron River and Menzies Bay divisions; E. S. Gustavson, formerly assistant to the manager, western district logging, as manager Kennedy Lake division.

Neil Robertson, formerly general manager operations eastern district, excluding pulp and paper, has been named assistant to E. G. Shorter, vice president production, excluding pulp and paper.

• There are said to be 1027 tree species in the U. S. and Alaska, some 180 of which are used commercially.



Don't Be Behind the 8 Ball!

Wire — Phone — Write

CLYDE P. CARROLL

MACHINERY CO., *Formerly Bader & Carroll*

FOR NEW AND USED

Sawmill and Planing Mill Equipment

HEAD RIGS

1 6' Yates-American anti-friction bearing, L.H.
1 9' Allis babbit bearing band mill
1 9' Allis roller bearing band mill
1 9' Filer & Stowell babbitt bearing band mill

Steel circular husks with top and bottom ball bearing arbors, chipper arbors complete with saws and belts. Several spare circular saw arbors, various sizes.

CARRIAGES

1 Monarch 4-block, steel frame, 66" opening, air dogs, electric taper attach., electric setworks
1 3-block, 72" opening, screw type electric set, steel frame
1 4-block, 60" opening, screw type, Johnson No. 5 electric set, timber frame
1 3-block, 42" opening, roller chain type, Electroset setworks, timber frame.
44" rack and pinion blocks
48" rack and pinion blocks
48" screw blocks
72" screw blocks
Allis No. 3 electric drive
Allis No. 4 electric drive
Andrus electric drive with column and dial
Andrus setworks light pattern for gas or electric drive
Assorted locks, setworks and other parts necessary for building carriage

EDGERS—Table Type

1 4x32 Wheland, with steel tables
1 4x36 Tower, 3-saw, wood tables
2 5x42 Tower 4 saw, with tables, NEW

EDGERS—Stub Type

1 Fabricated 4x30, 2-saw.
1 Portland Iron Works 4x30, 3-saw.
1 Fabricated 4x32, 4-saw.
1 Portland Iron Works 4x36, 4-saw.
1 Albany 4x42, 4-saw.
1 Tower 6x32, 2-saw.
1 Salem 6x40, 6-saw—3 gang, 3 moveable, new.
1 Albany 6x48, 5-saw.
1 Sumner 8x60, 5-saw.
1 Portland Iron Works 12x60, 6-saw.

EVERYTHING FOR planing mill and sawmill

Diesel Engines
Filing Room Equipment
Electric Motors — Pumps
Deck Machinery
Transfers — Conveyors — Rolls
Shafting — Bearings — Pulleys
Chain — All Type

Send us your inquiries for prompt quotation and shipment

SPECIALS NOW IN STOCK

PLANING MILL EQUIPMENT

Large stock good used heads, Disston, Jones & Orth, and Philbrick.

MOULDERS

1 Levi Huston 4x9 4-head, babbit bearing
1 Woods No. 702B 6x15 5-head, babbitt bearing
1 Berlin No. 108 6"x12" 4-head machine, 6-K top, 4-K bottom, 6-K sideheads, belt driven
1 Bamford Premier 6"x4", 6-K, motorized.
1 Smithway 6" XL, motorized.

PLANERS

Woods No. 404C, 6"x24", 8-knife with splitter, motorized ball bearing sideheads
1 Berlin No. 94X, 6x15, 6-knife round heads
1 Woods 404B, 6"x15" 8-K with motors and feed table
1 Stetson-Ross 4A4 16"x20" 6-K belt drive with steel frame feed table
1 Yates No. 92 6"x15" 8-knife double profile, feed table, blower system, chains, etc.
1 Yates No. A4 6x30 6-knife, round heads
1 Woods No. 404 6x15 8-knife, with top and bottom profiles
1 Woods No. 10 12x30 4-knife, square heads
1 Berlin No. 41 14x30 4-knife, square heads
1 Berlin No. 10, 10x20, 4-knife
1 Stetson - Ross No. 4A4 24x30 4-knife, round head, motorized side heads
1 Yates A-1, 8"x15", 4-K round T & B.

HANDLING EQUIPMENT

1 ¼-yd. Quick-Way Crane mounted on GMC 2½-ton truck with back hoe and 30' crane boom — reconditioned.

3 Hyster 54" carriers
2 Hyster 42" carriers
2 Hyster Space Saver lift trucks, Model YT4
1 Ross 14HT 52" forks, 16,000 lbs.
1 Shurman Model DDH50 with Ford V-8 power plant, factory unit
1 Star hammerhead gantry crane, 70-ft boom, 4-ton lumber handling type
1 Gerlinger carrier, 42" pkg.
1 Ross Model 70 rebuilt
1 Clark Clipper 2,000 lb.
1 Clark Carloader, 4,000 lb.
2 Yates, Model KM4L, 4,000 lb., battery operated
1 Hyster RT150 lift truck, 15000.

POWERHOUSE EQUIPMENT

1 only Westinghouse 1500-kva 2400-volt steam turbine

RESAWS

1 Blue Babe 54", L.H., air setworks, anti-friction bearing
1 Mershon 66", L.H.
1 Berlin H6 horizontal with divided infeed and outfeed bed, hydraulic lift
1 Clement 54", feed roll type, left hand
1 Berlin 64", lever set, left hand
1 New Carroll circular, 34" blade, 16x12 opening
1 Berlin 54" L.H. ball brg. overhead flex shaft feed roll drive
1 Berlin No. 260, circular.

POND & DECK SAWS

2 S & W Master drag saws, 30" stroke with 10' blades, elec. motor or gas engine drive

SPECIAL — FOR COLD DECKING

1 Hi-line unit complete with 1⅜" Skyline - blocks - tree shoes - guylines - poles - dble. drum donkey with Cadillac engine hydro drive.

We have other units available, write for description.

SURFACERS

1 American No. 4½ 7"x30", single.
1 American No. 444 8x36 3-knife round motorized, single.
1 Smith 8x24, single.

HOGS & CHIPPERS

1 Diamond No. 25
1 Phoenix No. 36
1 Hesse 64" BB, chipper

Wire — Phone — Write

CLYDE P. CARROLL

MACHINERY CO.
122 S.W. FIRST AVENUE
PORTLAND 4, OREGON

Phone CA 2-1013 or CA 3-8501

Mill Increases Recovery

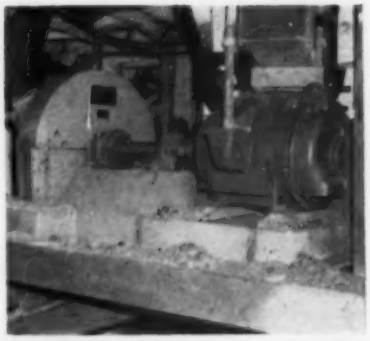
To increase the recovery of salvageable residue material by the handle stock pickers, Stebco, Inc., at Vancouver, Wn., has changed its conveyor system so that the sawdust from the edger and the resaw is not dumped in the main conveyor.

In the past all of the mill leftovers had been dumped into the main conveyor before it reached the pickers. Because of the great amount of sawdust from these two saws, some of the material that would have been suitable for remanufacture was missed and went to the hog. To eliminate this an additional belt conveyor was installed by the millwright, G. E. Parker.

Holes small enough to admit the sawdust, but not the edgings, were cut in the bottom of the two side conveyors that carried the leftovers from these machines. Underneath the holes an 18-inch belt was used to transport the sawdust to the conveyor that carried the sawdust from the gang saw.

The company, which has been producing chips for over eight years, has also installed a new model 50 Norman chipper that has a direct hook-up to a 100-hp electric motor built by the Electric Products Co., Cleveland, Ohio.

To further increase the degree of recovery, tests are being run on several different types and makes of slab barkers that have proved successful in the East. These tests are still in progress.



STEBCO, INC., at Vancouver, Wash., has changed conveyor system to prevent sawdust from edger, resaw, entering main conveyor.

Now! OUR 57th YEAR OF SERVING YOU . . .

EDGERS

Used 6" x 60" Salem gang edger—late model
New 6" x 54" Schurman—Latest Model
Used 6" x 60" L. H. Table Edger BB
Used 4" x 32" Wheland 3 saw BB table edger
Used 4" x 36" Newport BB table edger
Used 8" x 60" Allis LH roller brg. slab edger
Used 4" x 42" BB Newport slab edger
Used 6" x 42" Barton 4 gang slab edger
Used 12" x 84" Sumner edger
Used 6" x 30" Hoops stud edger
Used 4" x 32" American 3 saw slab edger
Used 4" x 30" Enterprise 3 saw table edger
Used 8" x 48" Evergreen bb dbbl. roll slab edger
Used 12" x 72" Sumner, split rolls—200 HP motor
Used 3 saw BB Vertical edger

HOGS AND CHIPPERS

Used 8" x 60" anti-friction edger with hook
New Diamond No. 25 hog
New Diamond No. 135 hog
New Diamond No. 145 hog
New Diamond No. 165 hog
Used No. 35 Diamond Hog
Used No. 38 Diamond Hog
Used No. 55 Puget Sound Hog
Used No. 40 Diamond Hog
Used No. 45 Diamond hog
Used No. 45 Puget Sound BB hog.
Used No. 35 Diamond Chipmill
New No. 145 Diamond Chipmill, roller bearing
New 48" Chipmaster for slabs, roller bearing
Used 66" Sumner Chipper—roller bearing
Used 64" Hesse-Eston 4-knife BB Chipper
Used 72" 3-knife chipper—Bargain Price

PLANERS—MOULDERS—SURFACERS

Used No. 404 BB S. A. Woods 6 x 15 Electric 8-knife planer-matcher with profile
Used American No. 77 8-knife BB planer
Stetson Ross No. 4 16 x 30 Timber Sizer
Used Berlin No. 95 6x30 6-knife matcher with ripper
Newman No. 99 6 x 15 6-knife planer-matcher
New Marathon 4 x 13 BB planer-matcher
Used No. 118 Berlin 6" x 15" planer
Used planer feed table
Used No. 100 Hoops 5" x 15" BB Pony Planer
4" x 4" Englefield electric moulder—frequency changer
Used 4" Smithway electric moulder
Used 490 Fay & Egan Surfacer
Used Hermance 3 x 25 Surfacer
Used No. 969 Fay & Egan Shop type planer-matcher-surfacer—like new.
Used Bamford Premier 4" Electric moulder
Used No. C88 Yates-American Moulder
Used 8" x 36" Whitney single surfacer

RESAWS & RIP SAWS

Used 54" Morshon, anti-friction brg. tilt rolls
Used 54" Berlin resaw, screw set
Used 36" No. 2 Faye & Egan BB circular resaw
Used 42" J. A. Fay & Egan band rip saw
Used 42" Cordesman band resaw
Used 40" No. 4 Band scroll resaw
Used 8 H-6 Yates 72" horizontal band resaw
Used No. V-6 Yates 72" heavy duty band resaw
Used 84" Morshon resaw, sawmill type, quick set
American No. 2 self-feed circular rip saw
Used No. 0 American rip saw
American Circular Resaw

NEW AND USED PUMPS

Used 6 x 4 x 6 Worthington Duplex boiler feed
Used Worthington 4" Centrifugal—1000 GPM
Underwriter approved Firepumps—many sizes
Boiler water feed pumps—New & Used
Used 5" x 6" Fairbanks Centrifugal pump—500 GPM
Used 12" x 12" Westinghouse Centrifugal pump — 3000 GPM
Used 8" Jeansville 2 stage Centrifugal pump—2000 GPM

COMPRESSORS

33 cu. ft. New Worthington air cooled
43 cu. ft New Worthington air cooled
65 cu. ft. New Worthington air cooled
122 cu. ft. Used Worthington air cooled
194 cu. ft. New Worthington air cooled
198 cu. ft. Used Sullivan air cooled
311 cu. ft. Used Ingersoll Rand water cooled
324 cu. ft. Used Ingersoll Rand water cooled
465 CFM New Worthington water cooled
500 cu. ft. Used Worthington water cooled
500 cu. ft Used Ingersoll Rand water cooled
750 cu. ft. Used Chicago pneumatic water cooled

HOISTS AND CRANES

Used single drum 6" x 15" spool
Used 5 ton Hesse Erston single drum hoist—like new
Used American dbl. drum 24 x 24, 40 HP
New Budgit hoists in stocks
2 ton and 5 ton hand winches in stock

SHOP TOOLS

Used Oster pipe & bolt threader
Radial drill
American radial drill
8 x 16 Racine hydraulic hack saw
Hemphill geared Maximaster
10 x 36 quick change lathe

MISCELLANEOUS

Used Stetson Ross 54" swing saw—BB
Used Hesse-Ersted 6 HP motorized saw arbor
American Columbia 48" oscillating 3 drum sander
Used Irvington 60" arm swing saw
Berlin 30" 3 drum sander
Used Morgan Box board matcher
Marson Johnson 20" precision trim & grinder
36" Crescent ball bearing head saw
Used Yates 36"—3 drum sander

FEED WORKS

New Gardner Hydraulic Shotgun Feed—on order
Used Wheland 5" belt feed
Used 5 x 6 SpooDee Twin feed
Used 16 x 18 Allis steam twin feed, self-contained
Used 3" hydraulic shotgun

LOG AND CANT GANGS

Used 28" Wehrhahn Log Gang, complete, many extras
Used 34" Mill Engineering log gang, air carriage
Marathon No. 200 gang saw, 15 x 20, for cants
Marathon No. 120 gang saw, for logs or cants
Linck gang saw for logs or cants, 22 x 22—in stock
Linck gang saw for logs or cants, 28 x 28—in stock
Marathon No. 300—28" x 28" gang saw
Marathon No. 400—14" x 28" gang saw

FILING ROOM EQUIPMENT

New Armstrong No. 4 Stretcher Roll
New Armstrong No. 4 Band Saw Grinder
New Armstrong No. 54 Circular Saw Grinder
Used Armstrong No. 6 Band Saw Grinder
Used Armstrong No. 16 Circular Saw Grinder
New Marathon Gang Saw Grinder
Used Covel No. 140 automatic Band Saw Grinder
Used Covel No. 83 24" Gang Saw Grinder
Used Covel No. 217 RH Band Saw Grinder
Used Covel No. 90 LH Band Saw Grinder
Used Covel No. 150 RH Band Saw Grinder
Used Covel No. 109 Stretcher Roll 16" capacity
Used Hanchett No. 250 LH Band Saw Grinder
Used Hanchett No. 948 Circular Saw Grinder
Used Hanchett No. 724 36" auto. circular Saw Grinder
Used 12" Welding Clamps
New & Used Levelling Blocks

KNIFE GRINDERS

Used 36" Fay & Egan No. 253 automatic knife grinder
Used American 30" knife grinder
Used American 32" straight wheel knife grinder
New Dependable No. 99A5 36" motor drive, automatic knife grinder
New Dependable No. 101A sideload grinder
New Defiance 38" motorized automatic knife grinder
Used Dependable 101A side head grinder
Used Berlin 275—36" Automatic knife grinder
Used Dependable 36" knife grinder, cup wheel
Used Hanchett 36" knife grinder, cup wheel

MILL EQUIPMENT

Used BeGe Hydraulic log turner
Used Corwith 1 man, 2 saw trimmer, 8' to 20'
New Wheland 1 man 2 saw trimmer, electronically controlled
Used 2-arm Log Step & Loader, 36" arm, 12 x 16 cyl.
Used 3-arm Log Step & Loader, 42" arm, 16 x 20 cyl.
Used 20' Portland Iron Log Turner
4—Used Carlingar Carriers 42"
New Willamette Iron Works Swede—rubber rolls
Steel Deck with flippers
Used 10" x 12" full oscillating Nigger
Used 6" x 8" full oscillating Nigger for air

HEAD RIGS AND CARRIAGES

Used 6' Union Iron Works band mill
54" Berlin Pony band mill, 7" blades
6' Yates band mill, all cast, LH
Used 8' McDonough bandmill
Used Monarch 3-block carriage, Andrus set
Used 16', 3-block 56" opening steel carriage
Used 18' Monarch 3-block 54" opening steel carriage
Used 14' International 3-block 52" opening steel carriage
Used 18' fabricated 3-block 60" opening steel carriage
Used 8' fabricated 3-block 32" opening steel carriage

LARGE MOTORS

Used 300 HP, 1200 RPM SB Fairbanks Morse
Used 300 HP, 600 RPM GE Slip Ring & Control
Used 250 HP, 600 RPM, West. Slip Ring & Control
Used 200 HP, 1200 RPM SB General Electric
Used 200 HP, 720 RPM SB General Electric
Used 150 HP, 720 RPM SB General Electric
Used 150 HP, 720 RPM SB Westinghouse
New 150 HP, 1200 RPM SB Allis-Chalmers
Used 100 HP, 1800 RPM SB Westinghouse
New 100 HP, 1200 RPM SB Allis-Chalmers
Used 100 HP, 1200 RPM SB Allis-Chalmers
Used 100 HP, 900 RPM SB General Electric
Used 100 HP, 900 RPM SB Fairbanks Morse
Used 100 HP, 720 RPM SB General Electric
Used 75 HP, 1800 RPM SB General Electric
Used 75 HP, 1200 RPM SB Allis-Chalmers
Used 75 HP, 1200 RPM SB Allis-Chalmers
Used 75 HP, 1200 RPM SB General Electric
Used 75 HP, 720 RPM SB Allis-Chalmers
Used 75 HP, 720 RPM, SB General Electric
PLUS MANY, MANY MORE

Agents for DIAMOND IRON WORKS—Foot Hogs and Chipmills. GARDNER—Hydraulic Carriage Feed & Log Deck. SCHURMAN MACHINE WORKS — Edgers, Hoist. WORTHINGTON CORPORATION—Compressors and Pumps. WHELAND COMPANY—Band Mills, Circular Sawmills, Edgers, Trimmers, Carriages. IRVINGTON—Trim Saws. ARMSTRONG MFG.—Filing Room Equipment. DEPENDABLE—Knife Grinding Equipment and Moulders. ALLIS-CHALMERS MFG.—Motors, Controls, Drives. COMET—Radial Arm Saws. DAVIS & WELLS—Woodworking Machinery. BEGE — Hydraulic Log Turners. P&H—Hoist. BINKS MFG. — Spray Equipment. MARATHON—AND LINCK GANG MILLS. DELTA—Power Tools.

THE PORTLAND MACHINERY COMPANY

"When You Think of Machinery, Think of Portland Machinery"

208 S. W. First Avenue — Portland, 4, Oregon — Phone CApitol 8-9633

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A

Abco Pacific, Inc. 104
Albany Machine & Supply Co. 112
Anderson Blowpipe & Mfg. Co. 107
Archer Blower & Pipe Co. 103
Autocar Division White Motor Co. 93

B

Bader, Bob 111
Balden, F. E. 110
Bartlett Electric Co. 110
Bio-R-Dry, Inc. 102
Bruning, Chas. 110

C

Caldwell Machinery Co. 112
Carroll, Clyde P. 113
Caterpillar Tractor Co. 14, 126
Chain Belt Co. 12
Champion Friction Co. 104
Chapman Chemical Co. 11
Clark Equipment Co. 83
Coast Neutralizer Corporation 109
Coe Manufacturing Co. 101
Collinson, Del 110
Columbia Pacific Corp. 110
Columbia Rubber Mills 103
Crown Machinery Co. 111
Cunningham Manufacturing Co. 111

D

Davies, E. C. 103
Disston, Henry, Division H. K. Porter Co. 78
Dominion Bridge Co., Limited 87

E

Electric Steel Foundry Cov. 4
Eugene Equipment Co. 104

F

Falk Corp. 89
Federal Tank & Pipe Co. 105
Filer & Stowell Co. 30
Forest Products Machinery Co. 102
Foster Co., L. B. 105

G

Galland-Henning Mfg. Co. 64
Gardner Denver Co. 91
General Appraisal Co. 76
General Machinery Co. 111
Greenlee Bros. & Co. 77
Greenlee Tool Co. 102
Gunderson Bros. Engineering Corp. 70

H

Hessler, Herbert 110
Hyster Co. 95

I

Industrial Development Co. 110
Insley Mfg. Co. 10
Instrument Sales & Service Co. 109

K

Kelton Co., William S. 110
Keystone Machine Works 82
Klamath Iron Works 84, 110
Klamath Machine & Locomotive Works 22

L

Laucks Laboratories 54
LeTourneau, Inc., R. G. 66 - 67
Link-Belt Speeder Co. 28
Lufkin Rule Co. 101

M

Mar Hook & Equipment, Inc. 103
Mater Machine Works 82
McDonough Manufacturing Co. 80
Medford Machinery Sales 110
Meiki Company, Ltd. 63
Mereen-Johnson Machine Co. 24 - 25
Mill Engineering & Supply Co. 75
Moore Dry Kiln Co. 96
Murphy Diesel Co. 81

N

National Machinery Sales 108
Newman Machine Co. 16
Nichols Boat Works Co. 105
Nicholson Mfg. Co. 109
Northwest Chains & Sprockets, Inc. 104
Northwest Marine Iron Works 73
Norton Co. 23

O

O'Brien Co., John M. 110
Ohio Knife Co. Cov. 3
Olympic Hardwood Co. 111

P

Pacific Saw & Knife Co. 103
Peterbilt Motors Co. 1
Portland Chain Manufacturing Co. 99
Portland Iron Works 2
Portland Machinery Co. 107, 110, 114
Power Transmission Products 74
Prescott Co. Cov. 2
Prineville Machine & Supply 100

R

Rader Pneumatics, Inc. 99
Raybestos Manhattan 85
Roberts Motor Co. 97

S

Salem Equipment & Supply Co. 94
Scougal Rubber Manufacturing Co. 105
Seattle Boiler Works 109
Shell Oil Co. 31
Smith Lumber Co., Ralph L. 102
Smythe, Ray 103
Soule Steam Feed Works 106
Soule Steel Strapping Co. 13
Spear & Jackson Ltd. 71
Standard Oil Co. 4
Star Machinery Company 112
Stetson Ross Machine Co. 101
Sumner Iron Works 6

T

Texas Co., The 32
Thompson & Holmberg 110
Timken Detroit Axle Div., Rockwell Spring & Axle Co. 21
Towmotor Corp.—Gerlinger Div. 79
Truck & Industrial Equipment Co. 82
Tyee Machinery Co. 106

U

U. S. Borax & Chemical Corp. 29

W

Ward Construction Co., M. A. 110
Weaver, Charles 103
Western Machinery Corp. 105
Wheland Co., The 72
White River Machine Co. 8
Wilder Saw Works 112
Williams White & Co. 94
Wood & Associates, K. B. 110
Wood Co., R. D. 15
Wood Treating Chemical Co. 71
Woods Machine Co., S. A. 102

Y

Yale & Towne Mfg. Co. 69

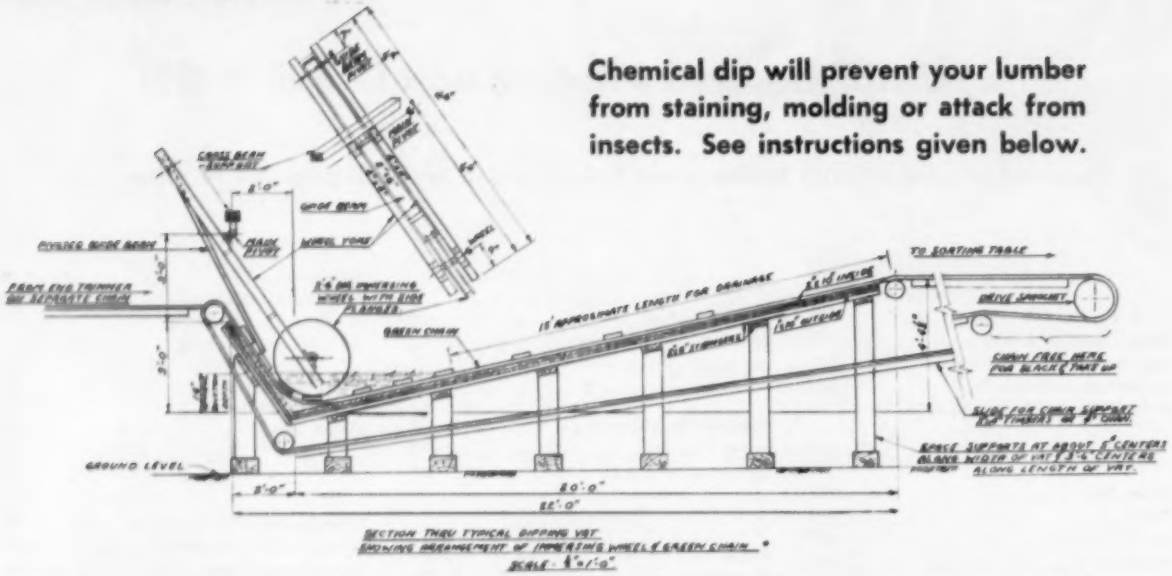
Z

Zidell Machinery & Supply 97

First Reports On

New Equipment

Chemical dip will prevent your lumber from staining, molding or attack from insects. See instructions given below.



SECTION THRU TYPICAL DIPPING VAT SHOWING ARRANGEMENT OF IMMERSING WHEEL & GREEN CHAIN

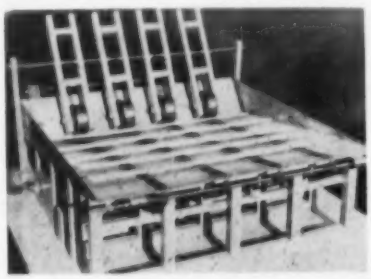
SCALE 1/4"=1'-0"

A Dipping Vat You Can Build for Your Own Mill

Positive protection for your lumber products by use of plant-made dipping vat is possible through use of the above plan.

This plan was prepared by R. T. Vanderbilt Co., Inc., of New York. It is taken from an actual model built in the company laboratories. Vanderbilt is distributor for Diprite, Santobrite S and Vancide 95 chemicals used to prevent lumber from stain, mold and insect attack.

The dipping vat itself may be made from either wood or steel. It is recommended that a large outlet be placed at the bottom of each end of the tank so that it may be drained periodically to remove accumulation of sawdust, chips, etc. To make sure that the proper mixture is used at all times a separate mixing tank should be provided. This can be a 50 gallon steel drum or other watertight container of suitable size. The dipping solution should be prepared in such a mixing tank before adding it to the dipping vat.



THIS IS A VIEW of a model dipping vat which was built in the laboratories of R. T. Vanderbilt Co., New York. Plan shown on this page calls for either lumber or steel construction.

This vat is designed for dipping green lumber. The length of the vat should be sufficient to accommodate the longest lumber to be treated. A common length is 20 ft. to 24 ft.

The output end of the vat should be long enough to provide drainage so that none of the solution is lost but returns to the vat. Maintain the level of dipping solution in the vat high enough to completely immerse the lumber.

For literature on Diprite, Santobrite S and Vancide 95 or other information regarding treating of lumber, write to R. T. Vanderbilt Co., Inc., 230 Park Ave., New York 17, N. Y.

Yours For The Asking

SUPPLIERS TO FOREST industries are constantly coming up with new and interesting literature describing their products and services. This material is offered free to our readers. Just drop a card or letter to the supplier mentioned. There is no cost or obligation. — Ed.

• A completely new 112-page "Engineering Data Book" for selection and design of Poly-V belt drives is available from ***Manhattan Rubber Div.,*** Raybestos-Manhattan, Inc., Passaic, N. J. The book contains many useful charts, tables and diagrams along with complete specifications for all drive sizes. This comprehensive manual should prove useful to maintenance engineers and others concerned with industrial belt drive design or maintenance. Write for Data Book No. 10.

• Vickers Inc., Detroit, has a new operating division which will be devoted specifically to the lumber industry and other related fields. Known as the Machinery Hydraulic Division, it will be headed by ***Merrill A. Hayden*** as general manager and ***W. F. Driver*** as general sales manager. The division will maintain close touch with the changing hydraulic needs of Vickers customers. The announcement was made by newly appointed executive vice president, ***J. F. Forester.***

• New ***Falk*** Bulletin 1105 combines in one book complete information on the company's lines of concentric shaft and right angle speed reducers for applications up to 140 hp (up to 72,000 lb-in output torque). Hp and torque ratings are given, as well as dimensions, overhung load and thrust capacities, and application pictures. Horsepower selection tables have been revised to show at a glance (1) the standard output speeds that may be obtained with commonly used input speeds, and (2) the full range of hp ratings available for each standard output speed. For a copy, write The Falk Corp., Dept. 255, 3001 West Canal St., Milwaukee 1, Wis.

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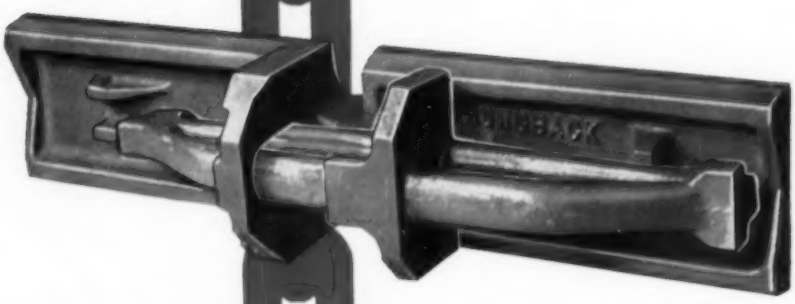

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